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THE BUSINESS OF GETTING WELL*

LEWIS HUGH McKINNIE, M.D.
COLORADO SPRINGS

Most physicians are inclined to give the persons who come for advice credit for showing a certain amount of intelligent appreciation of well grounded medical opinion. Of course, they realize that there are individuals of less discriminating taste who pass the physician by and knock at his neighbor's door, where good money is paid for an inferior type of service. The least exacting may even enter the building next door and traffic with a naturopath, a dispenser of Abram's mysteries, or perhaps one of the more distinguished brands of the healing cults. It is not my intention while trespassing on this delicate ground to appeal to professional jealousies but rather to attempt to penetrate the workings of the public mind when it goes about the business of getting well.

There are three emergencies in life in which the average human being is prone to ignore precept and resort to instinct. The siren's song is particularly sweet and alluring when the voyager's mind is bent on marriage, money or medicine. Society, which recognizes its obligations to chart dangerous reefs and to protect the individual from his most obvious follies, attempts to fulfil its obligation by legislation.

The traffic regulations in marriage are a continuous source of controversy. It seems difficult to keep down the speed limit and to prevent the alarming increase in clashes and mishaps. Apparently society shirks any responsibility as to selection in marriage. Either it holds a low opinion of eugenics as a science, or it realizes the futility of opposing so fundamental an idiosyncrasy. Other phases of marriage show more evidence of well intended interference, but society is still seeking an answer to the old question of how to convert a union of unknown ingredients into a perfect solution, when experience so often shows an unstable emulsion or even an explosive mixture. It is becoming increasingly apparent that even a constitutional amendment cannot accomplish the impossible.

Society is more dependable in its attitude toward property. It has shown a definite desire to protect the fool and his money. Gambling and lotteries, time honored methods of separating the optimist from his earnings, are under the ban. There are laws against fraud and the confidence game, and statutes are provided to prick the investment bubble before it has time to soar and carry away the savings of the unsuspecting.

In medicine, however, or, to put it more accurately, in the treatment of the sick, the attitude of society seems to be largely neutral. It has shown no great reluctance to accept all comers in this field of endeavor, and new schools of healing are given a cordial welcome. The conclusion seems almost justified that society regards medicine largely as a business, and, since science is the servant and not the master of business, it not infrequently comes about that science is used merely to bait the hook, or is omitted entirely.

As a license is required in almost all professions, some form must be provided. Following old traditions there must be a school and a diploma. The school may be founded on almost any theory, and since theories are not patentable, no proof of plausibility or usefulness is required. The doctor of this or of that is merely required to practice under the trade mark and standards of his guild. After complying with these simple restrictions, the practitioner of almost any theory of healing is licensed to do battle with disease and disability for cash. This situation is in many respects uniquely American, evolved by American genius; as we may recall, it was Yankee shrewdness that discovered the wooden nutmeg and the gold brick, and it was Barnum who proclaimed the "one a minute" birth rate. Our newer cults of healing do not seem to be in any great demand among enlightened foreign nations. The export trade is said to be limited. In England, France and Germany the use of the term "Doctor" in the treatment of the sick is apparently restricted to graduates of the regular school of medicine.

Danger to life from accident demands prevention and treatment; the need is sufficiently obvious to preclude argument, but it is difficult to arouse any spirit of cooperation or even of interest when the more insidious and more deadly preventable medical hazards are concerned.

Not much assistance can be expected from politics. Health issues have little vote-getting value. The average state or city health department has limited authority and can hardly be considered as influential. Legislative bodies are too sensitive to votes to interfere with any courage in public health matters. Education of the public will in time provoke more intelligent health legislation; little can be expected of efforts to reverse the process. It seems a little odd that a state legislature will appropriate money out of taxation to maintain a medical department of a state university, finance state hospitals in which only graduates of approved medical schools are employed, and at the same time grant licenses to practitioners of healing which are based on degrees which its state university does not accept or recognize. We have every reason to look to the university to wield a strong influence for medical standards based fundamentally on science. We should expect the university graduate to have an intelligent understanding of the basic value of physiology, bacteriology, pathology

* Presidential address, read before the Western Surgical Association, Omaha, Dec. 8, 1927.

and chemistry, and to support only those organized efforts to prevent and cure disease which utilize them. A university whose graduates do not believe in the germ theory has good cause to doubt the quality and efficiency of its teaching methods. We cannot expect every graduate to become a scientist or a scholar, but we can reasonably expect him to ask proof of the important facts offered to him and to weigh those submitted with some intelligence. It must be admitted, however, that college graduates are frequently among the enthusiastic followers of various cults of healing. Obviously it is not the loss of their patronage that I venture to deplore; it is the apparent repudiation of the sciences which are the corner stones of all universities.

In the proportion of study and research as compared to practice, and in the results attained, medicine has kept faith with the spirit of progress. The standards of medical education have been consistently raised, apparently more in response to scientific ideals than to any demand of competition or public opinion. There are, of course, many defects that are in need of a solution, but they are not the issues which commonly attract the public eye. The dollars and cents of life and death are undoubtedly the most prominent causes of dissatisfaction. The humanitarian and economic aspects of existence seem to be only distantly acquainted.

Two recent articles in prominent magazines voice a complaint on the high cost of sickness, and they virtually ask that the physician be indicted. It is doubtful whether the question of the cost of medical and hospital service deserves the prominence it receives to the exclusion of other phases of this "business of getting well." It would seem reasonable to put the necessity of preventing disease and unnecessary deaths first in importance. The task of curing illness and alleviating suffering and disability might properly come second, and then it would be in order to consider methods of reducing the cost. At least, the three aims might receive equal attention.

The inequalities of life, as represented by sudden disaster to the individual, and financial burdens out of proportion to earning power, are not limited to sickness. Fire, flood and violent death strike without justice or mercy. They demand a solution, and insurance has been suggested as a palliative. Society, however, in the matter of the financial burdens of medical aid is inclined to turn first to the idea that hospitals and physicians must accept a cut in pay. A recent article suggests as a remedy something like the mass production which is the basis of manufacturing economy. The "cost plus 5 per cent" idea—with endless belt conveyors and standardized parts—will never satisfactorily apply to medicine any more than it would to religion. Mutual understanding and cooperation will greatly reduce the work and the cost, but purely commercial methods, which disregard the humanities, will never meet the situation.

The present vogue of adding machines, potential values and budget systems is perhaps responsible for the popular way of urging health needs on the basis of the cash value of the individual on the auction block. This may be the only type of reasoning that will impress the present commercial age, but it may also prove to be a boomerang. If the market value of life goes down through overproduction and lack of employment, we find that our arguments for protecting life have been taken away, and we may even find our logic suggesting the primitive device of disposing of the young, the old and the disabled. There seems to be a feeling that the cost of sickness should take its place with clothing and amusements in the allotments of the budget. We can imagine the ultramodern family cutting off the 2 per cent allotted for surgical operations and transferring half of it to the funeral sinking fund and half to amusements. Probably some form of insurance is the needed answer. That will fit nicely into the budget system. By all means let it be thorough and efficient, with some such basis as that used in fire insurance. The premium must depend on the value of the property: the premises must be inspected at frequent intervals, the necessary repairs ordered and the order complied with. All unnecessary hazards must be removed by vaccination and prophylactic injections. Instructions as to diet must be observed on penalty of termination of the contract, with the cost of the premium to vary with the water supply and sanitary standards of the community in which the insured resides. There are some charms to this idea of commercial efficiency.

The medical profession seems to be the natural target for socialistic ideas. State medicine or some form of group practice which will cost very little—at least to the individual—are constantly being brought forth. The war against disease is, of course, a perpetual one, and perhaps we cannot expect the dictum "Win the war at any cost." However, it is equally impossible to ignore the war at any cost.

Our great educational foundations have contributed liberally to the medical colleges. Other agencies and many individuals have aided the hospitals, but the average member of society shows little interest in the machinery or equipment of the medical service. It might almost be said that the physician is "without honor" and without authority except in the sickroom. The public health service stands ready to aid in any emergencies but is otherwise largely ignored. It seems likely that the popular idea that medicine is largely a business may be responsible for this indifference.

It might be well to return here to the deficiencies of medicine. No doubt justice will be tempered with mercy in this case. I shall dismiss fee-splitting and other gross forms of commercialism with the expressed hope that they are growing feeble and are nearing the irreducible minimum. The problem of promoting postgraduate growth throughout the medical body appears to me to be one of the greatest needs. The standardizing of medical schools and the tightening of restrictions by state boards has raised the quality of those who enter practice. How may efficiency be raised, or at least be prevented from declining in the individual case? The hospital aims to maintain good work within its walls and to dispense a certain amount of education to its staff. The multiplicity of societies supplies an exchange of experience which stimulates the men who are permitted and able to attend. However, attendance at out of town meetings is limited for one cause or another to a minority. Postgraduate courses are a very necessary means for reeducation of the man of limited opportunity and ability, but they are either not used or are not available to a sufficient number. I believe that this is the greatest defect in the medical horizon at the moment, particularly if we are to defend the position that medicine is primarily a profession of scientific ideals and not a mere means of making a living. Of course, there are barnacles who have no wish to change their fixed existence, but I think it can be said to the credit of medicine that the great majority are anxious to do better work and could be enlisted in

postgraduate work by an organized campaign. The public welfare demands that every physician be offered opportunity and encouragement to share in the progress of science. I realize that much effort has been expended along this line and that much has been accomplished. I know of no other field of public service in which such constant effort is being made to keep abreast of the times as in medicine, nor any in which this need is so imperative. I believe that societies, such as this, must assume an increasing share in this responsibility.

I find it difficult to concentrate on this "business of getting well"; there are so many issues that present themselves. It had been my plan to offer as a main contention the theory that it was the public that needed education. It was in my mind to accuse the average American of being a poor partner in this matter of health; of showing poor judgment in the choice of his healers; of complaining of the high cost of illness and then wasting his substance on the worship of false gods, and of being an accessory before the fact in harboring unfounded superstitions and prejudices. Given a packed jury, I believe that I could convict him. Being an average man, he is sure to have failings. Something ought to be done about it. Of course, it must be admitted that the indictment has been urged with a whole hearted enthusiasm. I do not wish to imply that medicine is passing through a dark age, or that the public is entirely unresponsive to the efforts and aims of orthodox medicine. The remarkable progress that it has been our privilege to witness in the last quarter century could not have been attained without the loyal faith and generous assistance of a large and influential following. The many large associations in which laymen and physicians labor side by side for the alleviation and prevention of suffering mark a decided step forward in public support. The improvements in our hospitals, institutions for research, and medical and training schools are further evidence. With this concession to the accused public, I feel justified in returning to the charge.

A lament on the way the world is wagging that does not point any effort to better it is rather sterile. I am not sure that I can escape this implication by merely suggesting that society needs education. There are two common vehicles for administering the remedy: publicity and propaganda. I assume that there is a difference. The word "propaganda" has a sinister sound and is apt to convey the idea of an ulterior motive to be attained in a devious way. Yet it may also imply educational methods not too obvious to defeat their own ends. The lay newspaper and magazine are the tools with the best cutting edge, though difficult to borrow and hard to guide.

Public opinion is aroused and swayed to some extent by natural progress, but to a far greater degree by publicity and propaganda. Commerce and politics take full advantage of modern methods for reaching the masses. Individual or collective advertising to further the commercial side of medicine is obnoxious and unthinkable—it is almost a distinctive brand for charlatanism and quackery. On the other hand, organized efforts to further public health and preventive medicine cannot have any selfish or ulterior motive. Preventive medicine carried to the vanishing point would theoretically abolish the practice of medicine. We cannot visualize any such utopia, but all of us are committed to the ideals and practical methods that lead toward such a goal.

Propaganda through the press does not appeal to the average medical organization. The best type of medical man instinctively holds himself aloof from the newspaper. To be sure, the light of the press is directed downward almost as much as it is upward. It is destructive to social progress, as well as constructive, and the illumination is seldom pure or high in ultraviolet rays; but no one can deny its penetration or doubt that it is the beacon of the everyday man. Scholars and scientists have a deep distrust of the flippant touch of the daily sheet. They have no patience with the omissions, distortion and inaccuracies common to the public press. I believe that we see only the fallacies and ignore certain hard facts. The reporter has a cold but accurate view of what constitutes news. He is a trained specialist and has a deep aversion to wasting printed space. He knows that the reader and not the author is the one to be reached. It is obviously poor practice to print a paragraph or a headline that lacks general interest. There must be an active cooperation between the news reporter and the medical journalist—a fusion of ideas—if medical matters designed for public consumption are to pass through the double filter of indifference and misunderstanding.

A characteristic advertisement in the press states or implies that 95 per cent of human ills are the direct result of anatomic maladjustments which can be satisfactorily arranged by application at the right quarter. We can hardly hope to duplicate the clarity and optimism of such statements. It is one of the handicaps of our profession that our limitations and failures are so much more evident. We might, however, prevent some of the misapprehension that appears in the press regarding our own patients. We may often read that a prominent citizen died at the hospital following an operation. Baldly put, the assumption is obvious. Shivers of apprehension run up and down susceptible backs at the thought. Some of this dark surmise might have been saved by a fair statement to the effect that death was due to intestinal obstruction and that operation was unavailing. Many notices are garbled into complete misstatement. The medical profession has such a reputation for secrecy that Dame Rumor often supplies the reporter with his text. The wishes of the patient or the family for reticence must be respected, but I believe that in most instances they would sanction an informing statement if they recognized the significance. The surgeon or the physician should take more interest in the information that goes to the press. I am aware of the usual arguments against the use and abuse of press notices, but I think we ought to give heed to a common lay statement that the profession which talks the most about ethics is the one in which jealousies and recriminations are most noticeable. We can well afford to revise our ethics and let more light both in and out.

As for propaganda, the magazines carry many articles that are frankly antagonistic to medicine. I see no reason why the needs, achievements, successes and failures of medicine should not find a place in them. Public reserve is being rapidly abolished, and it has become quite the natural thing to call a spade a "spade" in the public print. In fact, it has almost become a fashion. Language may be too technical, but apparently any subject can be satisfactorily discussed in everyday publications.

The life insurance companies may be expected to launch extensive campaigns of education to combat unnecessary death rates. The large industrial organizations realize and energetically practice the demon-

strated conclusion that good medical supervision, service and education show a profit in the production columns. Both of these activities are of great educational value.

There are so many avenues for education and propaganda that only those well versed in such matters can intelligently point the way, but we can guess that every ardent propagandist must look wistfully at the Niagara power of the movies that flow unharnessed past our eyes. We need a DeMille—a whole troop of them—to present the tragedy, the drama and the fairy tales of medicine. They are ready at hand for the genius who can transfer them to the screen. We can easily think of the tale of the sleeping princess of Cretinism—the story of the giants and the dwarfs and the misshaped, confined in the dungeons, who are waiting for the magic touch to resume their normal places and forms; the vision of the benign genii of the sunshine, bottled behind window panes; the triumph of the culture tube revealing the invisible death which so often enters only through the doors of ignorance. It does not require a very facile imagination to foresee the value of such a weapon in the battle for health if only we can discover the champion who will pull this sword from its sheath.

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ENURESIS *

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So much has been written about the subject of enuresis that it might seem superfluous to elaborate on it further. However, the most valuable contributions have appeared in psychologic and mental hygiene journals which, as a rule, are not read by the general practitioner, who depends on the regular medical periodicals for information. Yet it is the general practitioner, not the psychologist or psychiatrist, who must treat most of the cases of enuresis. This article is an attempt to supply the missing link and to correlate the physical and psychic aspects of the problem.

Such statements as the following certainly indicate that the medical profession still considers the condition a bugaboo. Davison [1] says, "Much has been written but relatively little known of the condition which distresses mothers, shames children and frequently baffles physicians." Woolley,[2] a children's psychologist, states that "many pediatricians feel quite hopeless about cases of enuresis in which no physical difficulties are discoverable . . . that they have found no successful way of dealing with such cases." Unfortunately, it is true that many physicians dread to see a patient with enuresis come into the office or to the clinic because of the unsatisfactory response to the usual treatment. In fact, many physicians are using the very antithesis of the proper methods in handling such cases and actually do harm. Nevertheless, the condition occasions so much discomfort and annoyance to the entire family that strenuous efforts on the part of the mother are usually attempted to eliminate it, and she demands that something be done about it.

This paper is the result of considerable personal experience gained in the conduct of a dispensary enuresis clinic, and through consultation with authorities investigating the psychologic aspects of the subject.

* From the Enuresis Clinic, Pediatric Department of the Michael Reese Dispensary.

1. Davison, W. C.: Enuresis, Abt's Pediatrics **4**: 867.
2. Woolley, H. T.: Enuresis as a Psychological Problem, Ment. Hyg **10**: 38-53 (Jan.) 1926.

ETIOLOGY AND INCIDENCE

Enuresis is of common occurrence and a widespread difficulty. Most cases have continued from infancy, although some few are acquired following illness or unusual excitement. Most children have enuresis only at night (nocturnal), but some have incontinence during the day (diurnal) also.

Anatomic Theories.—Various theories regarding anomalies of the bladder and its innervation have been advanced to account for enuresis. Among the conditions held responsible are weakness of the sphincter; hyperexcitability of the trigon; abnormally powerful detrusor muscles; spasm of the bladder and bladders of small capacity; sensory disturbances (changes in reflex arc) with inability to feel bladder contractions, and atony of the bladder. For a more detailed discussion of these theories, Zappert [3] should be consulted. Suffice it is to say that as most cases can be cured without anatomically correcting these supposed defects, they may be considered as overrated in their importance numerically.

Heredity plays a rôle. Familial bed-wetters are common. The incidence is about equally divided early, but from 6 years on boys predominate.

Immediate Causes.—In most cases the causes of bed-wetting may be grouped under two large heads:

1. Organic or physical disturbances, the more prominent among which are (*a*) diseases of the central nervous system such as idiocy, cerebral palsy, spina bifida and tumors; (*b*) internal glandular disturbances, such as diabetes insipidus; (*c*) urinary changes, as when the urine is too acid or is excreted in too large a quantity (habit of drinking too much water), or when the specific gravity relations are reversed, becoming high during the day and low at night; [4] (*d*) diseases of the bladder and kidney, such as infections, calculi and nephritis; (*e*) local irritations in neighboring organs, such as narrow meatus, phimosis, pinworms, fissures and vaginitis.

2. Bad habit formation due either to lack of proper training or to an oversensitive nervous system (neurotic or emotionally unstable child) or both.

The many defects in group 1 are only infrequently the causes of enuresis, and even when present, merely their correction does not usually control the bed-wetting because the habit has been too strongly established. Davison [1] states that in two thirds and Holt [5] that in 68 per cent of their cases no adequate physical cause could be found. Some physicians put the proportion in which no physical cause is detectable as high as 90 per cent.[6] Mohr [7] did not find any specific relationship between physical defects and enuresis, but observed that many bed-wetters are in relatively poor nutritional and emotional condition and that evidence of vasomotor disturbances is more frequently noted among the enuretic children. Markey [8] states that practically every case of persistent enuresis studied by him was associated with other serious behavior problems. Nevertheless, in considering the possible cause of enuresis in any

3. Zappert, J.: Enuresis, Ergebn. d. inn. Med. u. Kinderh. **18**: 109-188, 1920.
4. Friedell, Aaron: Reversal of Normal Concentration of Urine in Children Having Enuresis, Am. J. Dis. Child. **33**: 717-721 (May) 1927.
5. Holt, L. E., and Howland, John: Diseases of Infancy and Childhood, New York, D. Appleton & Co., 1926, pp. 533-537.
6. Boenhein, C.: Zur Psychogenese der Enuresis, Ztschr. f. Kinderh. **43**: 211, 1927.
7. Mohr, G.: Observations on Causation and Treatment of Enuresis in Children, personal communication to the author.
8. Markey, O. B.: The Psychiatric Approach to Enuresis, Tr. Central States Pediat. Soc., Cleveland, Oct. 14, 1927.

child, the first point to determine is whether or not there is any physical cause for the difficulty. A complete physical and laboratory examination should be made to rule out these physical causes or to correct them before starting to treat the condition as an undesirable habit.

Before discussing the reasons for the faulty habit formation (group 2) which is the cause of most cases of enuresis, probably two thirds or more, it is well to state what seems to be the normal course of events in the infant learning to keep dry.

Training of the infant to control the emptying of the bladder may be begun as early as 6 or 7 months of age. It must be begun by the twelfth month. The mother must devote herself to the problem for from a few weeks to two months, as socializing the excretory functions is a difficult lesson. Habits of cleanliness do not come naturally. The excretory habits cannot be suppressed like other bad habits but must be properly directed instead. It becomes a business of forestalling the child and keeping him dry by taking him frequently to the toilet. The natural rhythm of urination as already established may be determined by making a chart recording the exact time, stimulus and conditions under which the infant wets; i. e., relation to feeding and napping. Then, in an attempt to follow the chart, the infant should be placed on a "chair," especially before and after feedings and naps. Steam rising from a little hot water in the chamber serves as an artificial stimulus to induce urination, and thus makes the desired association with being placed on the chair.[9] No playthings should be given the child while on the chair, nor should his attention be diverted in any way. He should not be left on the chair longer than five minutes.

Teaching the child to use the chair is only the first step. Next, at about 14 months, he must be taught to refrain from functioning (during the day) except on the chair. The mother should never disregard a request for attention. By eighteen months at the latest, although they may be tried at fourteen months, knit drawers or panties should be substituted for diapers. Drawers feel cold and uncomfortable when wet. By the time the child is 2 years of age, daytime accidents should be rare and a few dry nights may be expected.

After the child is trained for the daytime, night training should be attempted as follows: Restrict fluid after 5 p. m.; be certain that the child urinates just before being put to bed: forestall the first wetting by awakening the child between 9 and 10 p. m. and keeping him on the toilet until he urinates; place him on the toilet as soon as he awakens in the morning. Dry nights should be the rule by the time the child is from 2½ to 3 years of age.

As soon as the rhythm and habit of urination are fairly well established, the child should be taught to feel that it is distinctly his task and responsibility to keep dry.

The chief causes of failure [2] to train the child properly and consequently the psychologic causes of bedwetting are:

1. Postponing the training beyond the natural age. This delay establishes the bad habit more firmly and also forces one to deal with a more negativistic (older) child.

2. Arousing fear concerning the ability to control the bladder. Shaming, segregating and punishment concentrate the child's mind on the difficulties of bladder control. Fear of failure may become an obsession and cause wetting. One should never use severe punishment or arouse fear in connection with the use of the toilet. A mishap should be treated in a casual and kindly way. Faith that he can succeed can be aroused by emphasizing the successes with much praise and rewards and not mentioning the failures. Lack of faith in the child should never be expressed.

3. Arousing a feeling of antagonism as a result of the spirit of the training. Negativism should be avoided by not dominating unduly and unreasonably, and by not being impatient and inconsistent in one's methods. One should avoid making the toilet a battle ground for discipline. Children will then wet merely to annoy and get their own way.

4. Emotional scenes on the part of the mother or nurse concerning the use of the toilet, such as showing great concern over accidents, weeping, or petting or coaxing excessively. Children love emotional scenes which make them the center of attraction, and wetting, especially diurnal, may serve to keep them in the limelight, especially the child with an inferiority complex who has difficulty attracting attention by normal means.

5. Excessive "babying" by overaffection. This may lead the child to attempt to continue the period of infancy and enjoy maternal care.

6. Masturbation, which may be associated with enuresis as both conditions are frequently present in the emotionally unstable (nervous) child. Occasionally the confession and overcoming of masturbation result in the enuresis stopping also. More frequently, however, the suppression of masturbation may cause enuresis to develop as a substitution habit. Enuresis has been considered by some writers as an equivalent of sexual activity—an exaggerated pleasure of urination with premature sex personality development.[6] In any case of enuresis the presence or relationship of masturbation to the habit should be investigated, although my experience leads me to believe that the relationship has been much overemphasized in the literature.

7. Emphasizing organic ailments to the children or in their presence without sufficient basis for such statements; i. e., speaking of "weak kidneys" or "weakness of the bladder." The child may feel justified in persisting in the habit because he is sure that he has "weak kidneys" which he will outgrow when a man.

TREATMENT

The active treatment of established enuresis can be easily and successfully carried out if certain fundamental principles are adhered to. Most cases can be cured within a few weeks' time, but the utmost cooperation of the parents is essential. This "cure" must be carried out by persons who have good control of the child, have confidence in their ability to cure this condition, and can communicate this confidence to the child. The parents usually fail to meet these requirements, and so the treatment should be largely in the hands of the physician.

In the conduct of my enuresis clinic and in private practice, the following procedure is used:

1. Any physical defects such as were enumerated previously, as, for example, phimosis, should, of course, be corrected or eliminated if possible.

2. General improvement should be brought about in the physical condition by proper diet, hygiene and tonics, as many of these children are under par and anemic.

9. Fenton, Jessie C.: A Practical Psychology of Babyhood, 1926, pp. 269-273.

3. The following general rules will aid, and will result in improvement in most cases:

(*a*) Fluid (milk, water, soup) should be restricted after 4 p. m. The evening meal should be light and dry; i. e., consisting of cereal, custard, junket, bread, jello or fruit. Tea, coffee, pepper, salt and condiments should be avoided at all meals. Especially should salt and sweets be avoided after 4 p. m., as these increase thirst.

(*b*) The child should empty the bladder before retiring and again at 10 or 11 p. m.; one should be certain that the child urinates freely at these times.

(*c*) Generally speaking, taken as a group, most children who wet the bed have an oversensitive nervous system, are high strung and very active and are not emotionally as stable as those who do not wet the bed; in short, they are the so-called nervous children. This sensitive nervous system probably tends to respond too quickly to impulses sent to it from the bladder; consequently, there should be an afternoon nap if possible, and no excitement or high tension after 5 p. m., such as exercise, reciting, competitive games, loud laughter, movies or exciting radio programs. The child should sit down and play quietly after 5 p. m. He should not become too fatigued before retiring and should retire early; elevating the foot of the bed 6 inches is advisable.

4. Psychotherapy through proper instruction of the mother is necessary to eliminate the psychologic causes of bed-wetting enumerated previously. Certainly, in older children (from 5 to 6 years and up) fear and anxiety of committing the act,[10] the suggestion acting on the child's mind that he has failed to control a nasty situation, is a prominent cause of the difficulty. This type of child must be taught that the habit is not desperately tragic, and must be impressed with the fact that the trouble always gets well, and that it continues now because he is worried and keeps thinking about it. The mother must kindly ignore the mishaps and praise the successes highly—a difficult attitude for these mothers to assume. The problem should never be discussed in the presence of the patient. In younger children especially (from 3 to 5 years), the mothers should avoid emotional scenes when mishaps occur. In general, centering the attention of the enuretic child on his problem and shortcomings should be avoided. One should also avoid stressing sex in the treatment if possible. Psychoanalysis is rarely indicated except in adolescent children.

5. After fear and anxiety and emotional scenes have been eliminated, confidence must be restored in the child that he can be cured, as usually the child and the mother have given up. One should build up the faith that success can be attained and encourage each child. This is accomplished largely by suggestion. Usually some outside source of stimulation and inspiration is necessary. The physician rather than the parent can best build up this faith in the child. The physician must insist to the child that he can cure him, but to drive this thought home in the child's mind it is necessary to perform some striking yet harmless procedure; i. e., a hypodermic injection of sterile water [4] at the weekly visits to the physician with the absolute assurance to the patient that this will result in a "cure."

A visible record of successes is a very good method of helping to cultivate an atmosphere of optimism and confidence. One should have the mother mark the successful days on a calendar with gold stars and give high praise, thus emphasizing the successes with commendation and reward. Leave the other days blank and never mention or indicate these failures. These gold star calendars should be brought to the physician's office with the patient at weekly intervals.

10. Cameron, H. C.: The Nervous Child, 1924, pp. 113-121.

6. Most textbooks and articles on enuresis have relegated the drug treatment of enuresis to a very insignificant place. Many authors state that the main value of the drug is the suggestion of a cure to the patient, and that consequently almost any drug seems to help. I have found in my clinic that drug therapy is of major importance in speeding up the "cure," provided the drug is carefully selected to meet the indication.

The Blantons [11] state that one of the fundamental underlying causes of most enuresis is the nervous, high-tensioned child. Consequently, I have used sedatives such as phenobarbital in the maximum doses possible without producing lethargy. If the enuresis is purely nocturnal, the drug is administered at bedtime (1 grain, or 0.065 Gm., to a child of 4 or 5 years); if diurnal, it is given in divided doses three times a day. The results have been remarkable. The enuresis has stopped in many of the cases at once, even in the difficult cases encountered in dispensary practice. The phenobarbital must be continued for at least two weeks until the habit is thoroughly broken, and then the dose gradually reduced and discontinued unless there is a recurrence, when the course of treatment is repeated. This type of therapy tends to disprove the theory that very profound sleep with diminished consciousness of bladder contractions results in enuresis. The phenobarbital apparently raises the threshold of the nervous system response, so that the anxiety and fear complex and other subconscious psychic factors do not make suggestions to or otherwise intrude on the deeply sleeping brain, and the high-tensioned overresponsive nerves are quieted. This breaking of a vicious circle is especially successful in the nervous child but is of value in the treatment of all patients. If the first five principles are also carried out, the chances of recurrence are slight.

Atropine or belladonna in large doses will greatly help in certain selected types of cases; i. e., those in which there is a frequent desire for urination during the day associated with bed-wetting at night. In a series of observations carried out in our clinic, it was found that normal children when taking large therapeutic doses of belladonna urinated much less frequently in twenty-four hours, but passed about the same total twenty-four hour quantity of urine as when not taking the drug, provided the fluid intake was constant. This is explained by the fact that belladonna (or atropine) relaxed the smooth muscles of the bladder and so increased its capacity to hold fluid.

Changing the reaction of the urine may be of value at times.

In cases of diabetes insipidus, the hypodermic administration of pituitary extract twice daily stopped the enuresis and reduced the output of urine from about 6 to 8 quarts to 1½ to 2 quarts.

7. Surgical treatment in most cases is not necessary. Passing of sounds and the injection of fluids into the bladder to dilate it may be dangerous from the standpoint of introducing infection and should never be done unless a definite surgical indication is present.

8. Finally, the easiest method of curing enuresis, but one seldom agreeable to the mother, is to change the whole environment by removing the child to another home (boarding or nursery school) or hospital (especially in the ward). These bed-wetters almost invariably control the habit soon after being placed there, but must remain in the new surroundings for at least three weeks to obtain a permanent cure. Here the motive is that they try to do as the other children do and

11. Blanton, S., and Blanton, M. G.: Child Guidance, 1927, pp. 56-67.

stand well with their fellows (be approved of). The attendants, however, should take an indifferent attitude toward the bed-wetting.

I disagree with certain authorities that some normal children over 3 years of age cannot go through the night and must be awakened or taught to awaken themselves to go to the toilet in order to avoid wetting the bed. This does not cure but seems to establish the habit more firmly, even though there are not as many wet sheets. A child past 3 years of age without physical defects should be able to sleep through the night without emptying the bladder after 10 p. m. I also do not believe in the child attempting self suggestion by repeating "I am not going to wet the bed tonight," and so on. This focuses his attention on the matter and arouses his anxiety. Some advise making the child responsible for washing the wet sheets and changing his bed. Even though this is not done in the spirit of punishment but as a natural consequence, it again makes the wetting a paramount matter in the child's life and calls his attention to his failures (a bad policy). The possible value of bladder training by interrupted urination during the day (start and stop method), as advised by some authorities, is, I believe, outweighed by the danger of concentrating the child's mind on his difficulty.

Occasionally, an indifferent, lazy, slovenly, indolent child must have his attention focused on the bad habit in order to cure him. These are the exceptional cases, as most children are disgusted and ashamed of the habit and have tried to stop.

Finally, it is to be emphasized that enuresis is really only a symptom and not a disease entity; that it is usually a functional disturbance, the psychologic causes of which may vary considerably in different instances. Consequently, in order to obtain successful results, each case requires individual analysis. The approach that cures one child may aggravate the condition in another. Bad methods of treatment, such as punishment or fright, may occasionally temporarily succeed but incidentally may seriously harm other personality traits.

I have found that a special enuresis questionnaire aids materially in classifying the etiology and treatment, and in standardizing the cases. The accompanying questionnaire is used in our clinic.

104 South Michigan Avenue.

Enuresis Clinic Questionnaire

ENURESIS
- Nocturnal — Diurnal
- Age of onset
- Continuous or intermittent since onset
- Number of nights weekly
- Number of times a night
- How soon after retiring?
- Does patient awaken?
- Frequency of urination during day.
- Amount of fluids taken daily and when?
- Familial (do other children in family have habit?)
- Heredity—present in parents?
- *Previous treatment and methods of control:*
- Fluids restricted?
- Awakened at night? — How often?
- Medicines prescribed?
- Punishment? — What type?
- Emotional concern?
- Arguing and rowing?
- Babying? — Shaming? — Rewards?
- Attitude of family

NERVOUS SYSTEM
- Emotional condition.
- Nervous high-tentioned type?
- Play — Active — Quiet
- Disposition
- Sleep — Sound? — Restless?
- Sleeping arrangements
- Masturbation
- Personal habits—careless and slovenly
- careful and neat
- Progress in school

PHYSICAL EXAMINATION
- General nutrition
- Special factors bearing on enuresis, as phimosis, etc.

URINE EXAMINATION

Directions to Mothers

The following printed instructions are given to the mothers for the treatment of established cases:

Directions To Mothers.

Stop all punishments or any action that will arouse fear in connection with the habit.

Stop shaming.

Stop all arguing and rowing and dominating unreasonably—the question of the use of the toilet should not be a battleground for discipline.

Stop all displays of emotional concern and substitute an indifferent attitude. Treat mishaps in a casual and kindly way so as not to concentrate the child's mind on the failures and difficulties.

Stimulate interest in success by much praise, ado and rewards for dry nights—avoid mention of wet nights. Never express lack of faith in the child.

Keep a gold star calendar of dry nights only.

Stop "babying" the child by overaffection, etc.

Never mention to the child that he has "weak kidneys," etc., or that he will after years outgrow the habit.

GENERAL RULES:

1. Restrict fluid (milk, water, soup, etc.) after 4 p. m. The evening meal should be light and dry; i. e., cereal or custard or junket, bread, jello, fruit, etc. Avoid coffee, tea, salt, pepper and condiments at all meals. Especially avoid salt and sweets after 4 p. m., as these increase thirst.
2. Emptying the bladder before retiring and again at 10 or 11 p. m. Be certain that child urinates freely at these times.
3. Rest: An afternoon nap if possible; no excitement or high tension after 5 p. m., such as exercise, reciting, competitive games, loud laughter, movies or exciting radio programs. The child should sit down and play quietly after 5 p. m. The child should not become too fatigued before retiring and should retire early. Elevating the foot of the bed 6 inches is advisable.

REMOVAL OF RIGHT CEREBRAL HEMISPHERE FOR CERTAIN TUMORS WITH HEMIPLEGIA

PRELIMINARY REPORT *

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In the gradual evolution of resections of frontal, temporal and occipital lobes for the cure or attempted cure of invasive and otherwise incurable cerebral tumors, it has been found that the right temporal lobe, either frontal lobe or either occipital lobe (the left posterior to the supramarginal gyrus) could be completely removed without apparent mental impairment. It therefore seemed a logical expectation that the right cerebral hemisphere might be removed with little, if any, change in the mentality of a right handed person. At times patients already paralyzed on the left side from the inroads of cerebral neoplasms and without any prospect of its correction are eager to live, even at the price of permanent loss of function on that side of the body, if only the mind remains undisturbed. Five times during the past five years patients in this condition have urged every effort to save their lives, regardless of the physical disability. In four of these patients the tumors (gliomas) had been found at operation but their removal could not be accomplished without inducing a hemiplegia. The pressure symptoms had been relieved at the time of the first operation by a large decompression (removal of the bone flap). In each case the paralysis of the right side subsequently became complete.

The first of these patients was seen five years ago when in coma. The tumor was located by ventricular estimation and found at operation to be a glioma

* From the Johns Hopkins University and Hospital.

occupying much of both the right frontal and right temporal lobes. It seemed probable that the middle cerebral artery was incorporated in the tumor, and the ligation of this vessel would have caused a left hemiplegia. Several weeks later, when the left side was paralyzed, the right hemisphere was removed, but in the region of the carotid artery the tumor had invaded the dura and this small portion could not be excised. The patient died three and one-half years later from recurrence of the tumor. He was repeatedly examined before leaving the hospital and there did not seem to be any obvious mental impairment. He was always happy and grateful for his extension of life.

In a second patient, also in coma, a solid glioma was found to occupy the right parietal, temporal and frontal lobes. The bone flap was removed, and relief from pressure was afforded. At the insistence of his family, the right hemisphere was removed; but since the tumor had deeply invaded the corpus striatum, its complete removal was impossible. He died three months later of recurrence. An extensive infection had followed the operation, precluding any accurate estimate of his mental capacity.

A third patient died from hemorrhage forty-eight hours after the hemisphere had been extirpated for a recurrent glioma of the temporal, frontal and parietal lobes. A silver clip had slipped from the middle cerebral artery. Since consciousness was never regained, mental examinations were not possible.

A fourth patient died of pneumonia two weeks after excision of the right hemisphere. During all of the first week after the operation he was perfectly conscious and answered every question promptly and accurately. He was always perfectly oriented as to time, place and person. We could not detect any mental impairment from these cursory tests.

The fifth patient, a woman, aged 35, is still under observation. Her case was different from any of the preceding in that she had never had a headache; her only symptoms were gradual but rapid loss of sensation and motor power in the left side. These changes could hardly be due to any lesion other than a tumor in the internal capsule. An air injection showed obliteration of the right ventricle and slight obliquity of the third ventricle to the left. Slight movement of the left leg was still possible but she could not stand. Her brother, a physician, had anticipated the diagnosis and the eventual outlook if operation was performed. Both he and the patient were eager for a cure by immediate excision of the hemisphere rather than to have her submit to any partial effort, which would surely be followed by a recurrence of the tumor and doubtless prevent a subsequent cure. Any attempt to resect the tumor at such great depth could be done only by sacrificing the middle cerebral artery, and the results of this vascular loss, except for the absence of a homonymous hemianopia, would be essentially the same as those following removal of a hemisphere. The right cerebral hemisphere was extirpated in a single mass. The tumor, a glioma measuring about 3 by 3 cm., was so well surrounded by normal brain tissue that it was not seen until the specimen was cut later. Unfortunately, this patient, too, has been the victim of an infection, but she has now (two months after the operation) apparently recovered from its effects. During the high fever she was delirious off and on for several weeks. Gradually the periods of delirium have lessened, and she is now rational at all times. She is always well oriented as to time, place and person, has a good sense of humor and seems normal mentally.

The hemiplegia in these cases is always complete in the arm and leg but only partial in the face. In one patient, the facial movements seemed almost unchanged after the removal of the hemisphere. The other patients showed varying degrees of asymmetry much like the variations that follow involvement of the motor cortex by the tumor's growth. In the patient who lived three and one-half years after the hemisphere was removed, slight flexion and extension of the knee and thigh subsequently developed, but there was never enough function to be of any service. His days were spent in a wheel chair. No movements were ever observed in the arm.

The degree of rigidity in the extremities has also been variable. It has always developed more slowly and less intensely than we had anticipated. A complete flaccidity supervenes for at least several hours after the operation, and at the same time a suggestive positive Babinski reflex first makes its appearance. In none of the patients was there more than a mild rigidity during the postoperative stay in the hospital. The patient, now in the hospital, two months after the operation, only at times shows any resistance whatever on passive movements of the leg. One could scarcely say that there is any degree of rigidity of the leg. The arm shows slightly more resistance, enough to be definite, but as yet there are no signs of contracture. Both the arm and the leg lie in any position in which they have been placed. The patient, who lived three and one-half years, had a markedly contracted arm but no contracture of the leg.

Epicritic and protopathic sensation are completely lost over the arm, trunk and leg. Deep sensation is well preserved. Movement of the joints is painful, and squeezing the muscles causes pain. The patient can tell when the thigh, knee or foot is flexed or extended, or even which toe is manipulated, but is unable to tell whether the toes are flexed or extended. Painful stimuli induced by squeezing the muscles of the thigh or calf cause the leg to draw up in a rather vigorous reflex movement.

Another feature of interest is the preservation of sensation in the face. Epicritic sensation, such as very light touch and differentiation of degrees of temperature, is lost, but a heavier touch and stronger differences of temperature, the proper localization of stimuli and their doubleness are recognized accurately. The corneal reflex is diminished somewhat but preserved. The motor function of the fifth nerve is intact. The tongue protrudes with slight, if any, deviation. Taste over the anterior two thirds of the tongue is apparently preserved but lessened. Hearing is normal in both ears. This we have noted by gross test in all of the cases reported, and in the last patient audiometer readings are normal in both ears. This disposes of the assumption that there is cortical representation for hearing in the right temporal lobe. A complete left homonymous hemianopia has, of course, followed the removal of a hemisphere.

The success of the operation is dependent on painstaking care in hemostasis. The middle and anterior cerebral arteries are ligated just above their origin from the carotid either with silk ligatures or with silver clips, and the vessels are divided between the ligatures.

The elimination of the arterial supply of blood at once causes a considerable lessening of the cerebral bulk and makes the next step—ligature of the many cerebral veins that enter the longitudinal and transverse sinuses—much easier. Every vein that enters these sinuses must be carefully ligated before the hemisphere is removed. In the earlier cases the veins were "clipped" at the point of entrance to the sinuses, but in the last case they were carefully tied in the cortex with transfixion sutures of silk and a small triangular wedge of cortex containing the venous stubs was left attached to the longitudinal sinus. This method of handling the venous trunks is, I think, superior to that of clipping the unprotected veins; but much depends on the confidence which can be reposed in the clips. The recent use of "flat clips" makes for a feeling of greater security.

After all the arterial and venous channels have been isolated, ligated and divided, the hemisphere is gently liberated from its attachment to the falx, to the opposite hemisphere in the frontal region below the falx, and to the base of the skull. We have found it better when the whole hemisphere is thus liberated from all peripheral attachments first to section the frontal lobe, which requires only a sweep of the scalpel, and then, entering the anterior horn of the lateral ventricle with the index finger, to use this as a lever. The corpus callosum is then divided at a distance from the falx (in order to avoid possible injury to the left anterior cerebral artery, which is closely adjacent). With scissors or the edge of a spatula, the internal capsule is divided flush with the ventricle. The cerebral incision is then carried through the depth of the temporal lobe to a line just external to the inner dural margin in the middle fossa. The only bleeding encountered in the removal of the entire hemisphere is through very small vessels in the cut surface of the internal capsule (requiring only a moist tampon) and several small vessels which emerge from the under surface of the temporal and occipital lobes, doubtless from the posterior communicating and the posterior cerebral arteries.

In one patient, the tumor had grown so deeply that the cleavage line through the internal capsule passed through the lower fringes of the tumor. A second excavation was then made into the corpus striatum. It was this patient who subsequently died of hemorrhage due to a faulty clip. Obviously, one cannot tell from the surface inspection of the tumor whether the entire tumor can be included in the mass extirpation. In one case the tumor was not seen until the hemisphere was subsequently sectioned. This patient should be cured. In three instances the tumor had invaded the dura. In two of these the tumor subsequently recurred. In the third, a section of dura was excised with the adherent nodule of tumor, but the patient later died of pneumonia.

This is an operation of magnitude, but it should carry a relatively low immediate mortality owing to the relatively small amount of bleeding on which shock is so largely dependent. Except for the accidental slipping of a silver clip in one case there would not have been any immediate operative mortality in the series. Although this is scarcely an operation to be advised, it nevertheless offers to those desirous of living under adverse conditions a much longer extension of life than is possible in any other form of treatment, when the tumor cannot be completely removed; and in certain tumors situated within the confines of the hemisphere, it offers a cure otherwise not obtainable.

THE PHYSICIAN AND WORKMEN'S COMPENSATION

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The introduction of workmen's compensation legislation in the United States, in 1911, opened up a new field for medical and surgical thought and practice. Industrial medicine and surgery were already beginning to assume an important position in the field of general medicine and surgery, requiring, however, a broader application of those general principles that were part of the equipment of the average physician and surgeon. Foreign countries that had enjoyed the benefits of the progressive legislation for many years had had ample time in which to evolve an adequate method for the adjudication of the claims that arose from industrial accidents. It was to this experience that we turned in framing our legislation, and though there were many differences in both local and national problems, the fundamental principles were sufficiently similar to make their utilization practical.

On the whole, this legislation can still be said to be in its infancy in this country, since a majority of the states have only in recent years adopted it. This fact probably explains the marked lack of uniformity in the laws of the various states, a condition which is to be deplored. However, changes are being constantly made and improvements are noted every year.

With the exception of the industrial surgeon and physician, the medical profession has not kept pace with these changes; its interest has always been apathetic even to the fundamental character of the legislation. When we realize how great is the toll of industrial accidents, that the total for 1927 was more than six times as great as the military casualty list in our recent war venture, we can readily appreciate the importance of our problem, not only from its legal and economic angles but from the medical side as well. It means that every physician, even though he does not make a practice of industrial work, must at some time come in contact with the compensation law in some of its phases. Perhaps this may not apply to those physicians who live in rural communities and where accidents in agriculture and domestic service do not come within the scope of the acts of those states. In the more progressive states, however, practically all employments are included within the scope of the act. When it is appreciated that many of the workers for whose benefit workmen's compensation legislation has been enacted go to make up a large proportion of the practice of the average physician, it can be readily seen how important the subject really is. However, there has been insufficient interest, and in many cases confusion exists as a result of this lack of interest. It behooves the physician to serve the best interests of his patients, these industrial workers, by familiarizing himself with the various features of the compensation laws, becoming especially acquainted with the medical provisions of these acts.

The first problem for the attending physician is to determine whether the clinical condition that is disclosed by examination can be attributed to trauma. Obviously, such conditions as fractures and lacerations do not require further consideration, but thought and study must be given to the importance of the rôle of

trauma in the causation or aggravation of such conditions as cancer, tuberculosis, diabetes, syringomyelia, multiple sclerosis, general paralysis and cardiac decompensation. Sometimes the physician will find that the legal and medical interpretations of an accident may not jibe. Again, he may be called on to distinguish between an accident and an occupational disease. The formation of a blister from carrying a wheelbarrow, the occurrence of a tenosynovitis in the thumb of masons, the development of peripheral neuritis from the vibration of a punch press, are all occupational conditions and in most states not compensable. The classic occupational diseases, such as lead, arsenic, mercury and phosphorus poisoning, caisson disease and anthrax infections, are compensable in many but not all states.

The second problem for the consideration of the attending physician is that of medical and surgical service. Practically all states have definite provisions for medical and surgical service in the act. No specific definition of the character of the service is made except the qualification that the service furnished must be reasonable. However, other limitations may be imposed which intrinsically affect the character of the treatment. These limitations are in the financial allowance for full medical treatment and service, and in the time permitted for medical attention. In many cases the amount includes not only the surgeon's fees but also the hospital and other expenses.

A feature of the medical service rendered in compensation cases that has caused perhaps the greatest disagreement and unpleasantness between the medical profession and the employers is that of the selection of physicians. There is much to be said on both sides of the question. The physician, of course, must be guided by the statutory regulation. In the various states these are:

1. Selection of physician by employer at employer's expense.
2. Selection of physician by employee at employer's expense.
3. Selection of physician by employee if employer neglects or refuses to provide adequate service.
4. Authority to order change of physicians, if service is incompetent or inadequate.
   (*a*) Requested by administrative commission.
   (*b*) Requested by employee.
   (*c*) Requested by state medical board.
5. Selection by employer.
6. Panel system.

The abuses of medical service, and there are many, whether on the side of the employer's physician or the employee's physician, are the abuses that prevail wherever there is the incentive for gain. These can be properly restricted by proper administrative methods.

The question of medical and hospital fees is frequently arranged by statutory provision in various states. In some of these states definite schedules are provided which determine the exact amount for each particular item, such as visit, dressing, minor operation, major operation and mileage. In other states, the medical bills are passed on by the industrial commission or bureau.

Another cause of dispute between the medical profession and the employers is that of medical reports to insurance companies. Very few states give any cognizance to this question, but New York has recently denied payment of medical bills in cases in which medical reports are not furnished within twenty-one days. These reports are necessary, and the medical profession has been rightly criticized for its lack of cooperation in this matter.

A review of the compensation laws of the various states discloses a fair degree of uniformity in their medical schedules as to type and degree of disabilities. Nevertheless, there is still some confusion in the minds of physicians and laymen as to the exact interpretation and definition of the terms and contents of these schedules. We have therefore to consider especially the term "temporary disability" and "permanent disability," and the qualifying terms "partial disability" and "total disability." These terms have been given a different construction in different states both by statutory provisions and by the interpretation placed on them by the courts.

Temporary disability is the physical condition immediately after an accident which prevents an injured person from returning to work.

Permanent disability is the residual damage or loss of use after all medical and surgical measures have been instituted and sufficient time has elapsed to allow the ordinary consequences of trauma to disappear by natural means.

It is not always easy to prognosticate the period of temporary disability. Every man is a law unto himself. Besides the actual clinical condition other factors, such as age, psychic make-up, economic stress and social conditions, may materially affect this period. One must therefore be guarded in all but simple conditions.

It is in the estimation of permanent disability following industrial accidents that the average physician errs badly. Too often do we find gross discrepancies in the opinion of various medical men in the same case as to the extent of permanent disability that only too well emphasize the unfamiliarity with the subject rather than the wilful intention to exaggerate for personal gain. The explanation for this can be found in the fact that there is no method or basis for evaluation of the incapacities sustained in industrial accidents. True, there are existing schedules that arbitrarily fix the amount or period for a specific injury or disability. These schedules, however, are based on economic and other factors and are not comprehensive enough and do not furnish the physician with any plan to follow in evaluating those disabilities. The law may say "for total loss of use of an arm 200 weeks' compensation at $17 a week," but the responsibility of estimating what amount of loss of use is represented by an ankylosed wrist, or a fracture of both bones of the forearm with vicious union, or a section of the musculospiral nerve, falls on the shoulder of the medical profession, and the statute cannot be of any help in this respect. It is perfectly obvious that to incorporate within the statute the endless permutations and combinations that comprise the end-results of trauma and to fix indemnities for each one of those disabilities would be not only impracticable but also too arbitrary and would work an injustice on the injured worker. However, it would be most practical to incorporate certain general principles to be used as a guide in estimating the extent of permanent disability, such as the rôle of structure, function and cosmetic result in arriving at any opinion.

The human machine is a very complex mechanism and, though we can arrive at a fairly approximate value of its respective parts to themselves and to the machine as a whole, there is still a possibility of error. We must therefore be ever mindful of our limitations in attempting to reduce variable and unstable conditions into exact entities. It is nevertheless possible to estimate and evaluate functional incapacities by a rational scientific method based on the time study of Taylor,

the applied motion study of Gilbreth and the physico-mechanical methods of Amar. In this manner the guess is taken out of the opinion, and permanent disabilities are computed along scientific and accurate lines rather than by arbitrary rulings or compromise conferences.

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THE EFFECT OF INHALATION ANESTHESIA ON INTRACRANIAL PRESSURE

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The extensive research in recent years on the cerebrospinal fluid and its circulating system [1] has demonstrated that ether, among certain other drugs, accelerates the formation of cerebrospinal fluid. Dixon and Halliburton [2] have shown that both ether and chloroform markedly increase the cerebrospinal fluid pressure. Whether this increase of pressure is due to an excessive formation of the fluid or to other factors remains to be determined. In clinical work I have repeatedly demonstrated an elevation of cerebrospinal fluid pressure attending inhalation anesthesia when induced by ether, chloroform or nitrous oxide. The elevation is probably most pronounced in the latter, and I believe that this is due to the elevation of intrathoracic pressure, which in turn produces cerebral venous stasis and diminished absorption of cerebrospinal fluid.

Many surgeons, in operating on patients with increased intracranial pressure, have observed the development of profound medullary disturbance apparently inaugurated by the anesthetic, and an occasional fatality occurs, probably from the anesthetic alone, the patient succumbing before the operation is begun. It has frequently been found advisable to postpone the completion of intracranial operations because of severe medullary reactions or loss of blood from the excessive venous congestion inaugurated by the anesthetic. The advantages of local anesthesia in intracranial procedures are now recognized by most neurologic surgeons, though many were extremely reluctant, because of temperament or lack of experience, to attempt major intracranial operations under local anesthesia until the experiences of the past war demonstrated the safety and adequacy of such anesthesia.

Shortly after the war, while making ventricular examinations in the study of epilepsy, I [3] tapped the ventricle, and before withdrawing the fluid attached a mercurial spinal manometer to the brain needle and determined the amount of intracranial pressure. These ventricular tappings were done under general anesthesia, and we were astonished at the high degree of pressure encountered, often ranging from 20 to 40 millimeters of mercury. In certain of these cases, a preliminary spinal puncture had shown a pressure below normal (8 mm.). The average brain tumor, when sufficiently large to produce general pressure symptoms —headache, vomiting and choked disk—produces a pressure of from 30 to 40 mm., while in certain types of encephalitis and in subarachnoidal obstructive types of hydrocephalus, pressures often run as high as from 60 to 70 mm. Why these epileptic patients gave such a high intraventricular pressure measurement without general signs of increased intracranial pressure was explained only after subsequent ventricular taps were made under local anesthesia, when pressures were found to be normal or often subnormal. As a result of this experience, I realized that inhalation anesthesia probably was responsible for the marked elevation of intracranial pressure. Though neurosurgeons had for several years recognized the marked advantages of local anesthesia over general inhalation anesthesia in intracranial surgery, we did not suspect the difference to be due to pressure changes. Under inhalation anesthesia it had commonly been our experience, even after the removal of large brain tumors, to find it impossible to close the dura because of the rapidly developing cerebral edema, and we were exceedingly grateful for Weed and McGibbon's studies in dehydration which provided us with a method of shrinking the brain, making satisfactory closure of the dura possible. Under local anesthesia such experiences are exceedingly rare, while under inhalation anesthesia they are the rule rather than the exception.

The central nervous system is contained within the rigid cranium and spinal canal, completely lined by an inelastic dura which is incapable of expansion to meet increases of intracranial pressure; therefore, any increase in brain, blood or cerebrospinal fluid volume must be compensated by a reduction in the volume of one or the other of these elements. If there is an enlargement of the brain through inflammation or new growth, compensation is made by a reduction in the amount of cerebrospinal fluid and blood volume. The cerebrospinal fluid, which fills the ventricles and completely surrounds the central nervous system, is a great pressure adjustment mechanism because of its rapid secretion and absorption. In intracranial new growths, adjustment is made up to a certain point by displacement of cerebrospinal fluid, and many brain tumors attain enormous size because of this compensating effect before producing general pressure symptoms. If a tumor is located in a region that compresses the ventricular outlet, producing hydrocephalus, pressure signs are exhibited at a much earlier period because the cerebrospinal fluid space adjustment mechanism is impaired. In hydrocephalus due to an organic block of the ventricular or subarachnoidal cerebrospinal fluid circulating system, the pressure adjustment mechanism of the cerebrospinal fluid is not available and compensation is obtained at the expense of circulation and pressure atrophy of the cerebral hemispheres, as the dilatation of the ventricles proceeds. If the onset of such an obstruction is slow, circulatory adjustments take place in the medullary centers which permit a prolongation of life, though blindness and cerebral disturbance supervene. In acute increases of intracranial pressure, the cerebrospinal fluid pressure adjustment mechanism is effective until most of the fluid has been crowded from the ventricles and the subarachnoid space, at which point adjustment possibilities become exhausted and the cerebral and medullary circulation becomes impaired.

The cerebrospinal fluid is formed within the cerebral ventricles and is elaborated by the choroidal plexus. It passes through the ventricular system, which it leaves by way of the foramina of Luschka and Magendie, located in the roof of the fourth ventricle, and enters the subarachnoidal system. It is then at first contained in the large cisternal dilatations of the subarachnoid

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system at the base of the brain and passes in the spinal canal and over the cerebral cortex, from which its absorption takes place into the venous system by a process of filtration through the microscopic arachnoidal villi along the venous sinuses, as Weed [4] has amply demonstrated. Any block occurring in the cerebrospinal fluid circulating system, whether in its ventricular or subarachnoidal portion, will produce an increase of intracranial pressure through fluid retention—hydrocephalus—as will any occlusion of the absorptive mechanism (the arachnoidal villi filters), which may be plugged by filtered out blood cells. If there is an obstruction to the escape of cerebral venous blood through a sinus obstruction, there will be a corresponding increase in intracranial pressure, as a result of venous engorgement and stasis, which also retards cerebrospinal fluid absorption. Any agent producing a stasis in the cerebral venous circulation will produce an increase of intracranial pressure, which may be readily demonstrated by the Queckenstedt test as follows: During a spinal or ventricular puncture, if one jugular vein is compressed, a normal cerebrospinal fluid pressure of 8 mm. of mercury will be elevated approximately to 16 mm. If the two jugulars are simultaneously compressed, the cerebrospinal fluid pressure is raised to 24 mm. This elevation of pressure usually occurs within thirty seconds of the venous compression and, if compression is maintained, obstructing the return flow of blood from the brain, the cerebrospinal fluid pressure continues to ascend and is followed by profound cerebral disturbance resulting in headache, vertigo, excitement, tremors and even convulsions. If during spinal or ventricular puncture the patient strains, there is an immediate elevation of cerebrospinal fluid pressure because of an increase of intrathoracic pressure which by compression of the thoracic veins interferes with the return circulation from the brain with an effect similar to compression of the jugulars. Therefore, it is necessary, when ventricular or lumbar cerebrospinal fluid pressure determinations are made, that the patient remain relaxed and with the mouth kept open to prevent an elevation of intrathoracic pressure.

Inhalation anesthesia often, because of the irritating effect of the anesthetic, is accompanied by prolonged straining and vomiting. During the stage of excitement the rigidity and straining of the patient are often pronounced, and the marked venous stasis is evidenced by congestion in the veins of the scalp, face and neck. When the elevation of intrathoracic pressure is maintained for many minutes by a struggling patient, the acute cerebral venous engorgement accompanying the initial irritation of the anesthetic tends to produce further straining and vomiting. The flushed face in the later stages of anesthesia is often the reaction of an increased blood pressure inaugurated by a disturbed medullary circulation caused by congestion, and in intracranial surgery both venous engorgement and the induced hypertension of compensating circulatory adjustment add considerably to the loss of blood.

In patients with a marked elevation of intracranial pressure in whom the cerebrospinal fluid pressure adjustment facilities are exhausted and the cerebral circulation is seriously affected, any further sudden increase of intracranial pressure due to an induced cerebral venous engorgement attending the irritation of an inhalation anesthesia may be accompanied by almost immediate disastrous effects, or result in a profound cerebral edema, which is responsible for much early operative mortality. I have in two cases, in which previous ventriculometry (local anesthesia) had shown pressures of 30 and 36 mm. of mercury, attempted the removal of a brain tumor under general anesthesia. The pressure obtained on tapping the ventricles after the induction of inhalation anesthesia, and before the skull was opened, revealed a further elevation of 15 and 20 mm. In each instance, the tapping of the ventricle became necessary because of impending medullary failure. This is a condition I have not experienced with local anesthesia in a large series of intracranial operations. As a result of these experiences, inhalation anesthesia has been entirely supplanted in my service by local or combined colonic and local anesthesia. Ether used by the rectal method does not cause serious elevation of intracranial pressure, though there is undoubtedly some increase of pressure.

In inhalation anesthesia, the elevation of the intracranial pressure is intensified in proportion to the degree and length of the irritative stage, and is due primarily to the raising of the intrathoracic pressure and the resulting cerebral venous stasis, which, in turn, by interfering with cerebrospinal fluid absorption, cripples this important pressure adjustment mechanism. Furthermore, the venous congestion of the choroidal plexus probably incites an increased production of fluid. The complications attending anesthesia for intracranial surgery have been reduced by procedures which tend to shorten the stage of irritability and to insure "even" anesthesia, and undoubtedly these efforts have resulted in the development of that anesthetic skill which is so conspicuous in some of our American neurosurgical clinics; though even in the hands of a skilled anesthetist experienced in the induction of anesthesia for intracranial work, cerebral edema and medullary disturbance are of common occurrence. An anesthesia conducted with a marked or prolonged irritative stage will so jeopardize an intracranial invasion that it becomes a condition calling for serious consideration. In craniocerebral injuries with hemorrhage producing marked acute pressure symptoms calling for operation, an inhalation anesthesia, with a further sudden elevation of intracranial pressure, may convert a simple venous congestion into a profound cerebral edema, or incite further hemorrhage. Undoubtedly, the use of inhalation anesthesia has been responsible for many of the bad results attending decompressive operations for the relief of acute elevations of intracranial pressure following head trauma.

CONCLUSIONS

1. Inhalation anesthesia of any type will greatly increase intracranial pressure, especially if attended by straining and vomiting.

2. The elevation of pressure is secondary to a cerebral venous stasis, resulting from an increase of intrathoracic pressure during the irritative stage of anesthesia.

3. A sudden elevation of intracranial pressure attending inhalation anesthesia will often induce a marked cerebral edema or exhaust an impaired medullary circulation.

4. All intracranial invasions can be safely and satisfactorily carried through under local anesthesia. When desired, local anesthesia may be supplemented by oil-ether colonic anesthesia, which does not seriously elevate intracranial pressure.

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THE PHYSIOLOGY OF THE MALE REPRODUCTIVE SYSTEM

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While performing a series of experiments involving ligation and resection of the vas deferens, I became interested in the physiology of the storage of spermatozoa and of their progress from the testis to the urethra. Experiments were devised to elucidate obscure points that seemed to be interesting. Some of these experiments and the conclusions drawn from them are herewith presented.

In some species of animals there are cyclic periods of testicular activity. This is especially noticeable in those animals that hibernate. But in many species, and this is true in man, there is a continuous production of spermatozoa. The spermatozoa are present in great numbers in the lumen of the seminiferous tubules. The quantity produced per unit of time varies considerably according to physiologic conditions. Attention has been called to this fact elsewhere,[1] and it need not be discussed here.

Not all maturing germ cells become spermatozoa. Some of these cells degenerate before reaching the definitive form. Spermatocytes and spermatids in various stages of degeneration may be seen in the lumen of the seminiferous tubules of normal testes. There is also a colloidal material present in the seminiferous tubules, the source of which has not been clearly established. Part of this colloid is apparently produced by the autolysis of spermatocytes and spermatids. Part of it appears to be produced by Sertoli cells.[2]

This material (colloidal fluid, degenerating germ cells and spermatozoa) moves slowly but steadily through the seminiferous tubules to the collecting tubules. Its movement, brushing along the sides of the tubules, causes the spermatic elements to slant much like grass or weeds in a slowly moving stream. That there is a constant and considerable movement of this material down the seminiferous tubules is clearly seen in experiments in which the vasa efferentia are ligated. Within forty-eight hours the testis becomes considerably distended by the retained seminiferous products. The relative inelasticity of the tunica albuginea prevents much enlargement of the testis. The hardness of the organ indicates that considerable material has accumulated during the forty-eight hours, causing pressure within the testis. The fact that the accumulation begins immediately after ligation of the vasa efferentia shows that this material under normal conditions is constantly leaving the testis.[3]

The obvious conclusion is that there is a constant movement of materials from the seminiferous tubules into the collecting tubules and from the testis. Apparently there is little room for the storage of this material in the testis.

The tubules of the epididymis are about 26 feet long in man. Their diameter and volume is not constant, and the variation is considerable. The epididymis is supplied by motor nerves. Stimulation of these nerves affects the size and volume of the tubules. Among the more recent papers affirming this are those of Macht,[4] Waddell[5] and King and Oslund.[6] This change in volume of the tubules in response to stimulation suggests that this is a mechanism for periodically emptying the epididymis of spermatozoa. This contractile mechanism will be considered more in detail later.

It is important to note here that there is a continuous flow of material from the epididymis into the vas deferens. If the vas deferens is occluded, the epididymis becomes distended and hardened. The volume of the epididymis increases noticeably within forty-eight hours. This increase continues until the tubules reach their maximum of distention. If the tubules are punctured at this time, the resulting flow of spermatic fluid clearly indicates that there is considerable pressure within. This is to be expected, since there is a continuous flow of material from the testis into the epididymis. It soon becomes evident to any one performing such experiments that retention of spermatic fluid in the epididymis is not a normal process. There is a constant flow of fluid from the epididymis into the vas deferens, though this flow may be periodically increased. The epididymis is not a reservoir for spermatozoa in the sense that it retains the spermatic fluid for periodic emission.

The vas deferens in man is a tubule about 20 inches in length. It has thick, somewhat inelastic walls. Because of the anatomic structure of the vas deferens, it is unlikely that it functions as a reservoir. The spermatic fluid normally moves in a constant stream through it from the epididymis. The vas deferens, however, is supplied by motor nerves which may temporarily increase the rate of emission from it. The ampulla has thinner and more elastic walls, and its lumen is greater than that of the vas deferens proper. Its volume in man, when distended enough to smooth its inner surface, is about 2 cc. Like the epididymis and the vas deferens, it is capable of contracting. It appears to be a small reservoir for the spermatic fluid, though there is a constant movement of this material through the ampulla.

The duct of the seminal vesicle empties into the vas deferens about 1.5 cm. from the terminal orifice of the latter. Spermatozoa are often found in the seminal vesicles in cadavers. Because of these facts, some observers[7] have concluded that the seminal vesicles are reservoirs for spermatozoa. This theory has met with the difficulty that the seminal vesicles are poorly developed or present only as vestiges in many species of animals. In these species, if storage of spermatozoa takes place, it must be in some other organ.

Fisher[8] was unable to find spermatozoa in the seminal vesicles taken from living rats or guinea-pigs or soon after they were killed. According to Fisher, spermatozoa that are found in the seminal vesicles are migrants which enter the vesicles after the death of the animal. I have repeated these observations and have obtained similar results. Spermatozoa are not stored in the seminal vesicles.

If these observations are correct there is a continuous flow of spermatic fluid from the seminiferous tubules through the epididymis and vas deferens into the urethra. I have found sperm in the urethra of dogs, rats and guinea-pigs, and it is by no means uncommon

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to find spermatozoa in human urine analyzed in the physiologic chemistry laboratory. The usual explanation offered for the latter finding is that such urine has been collected following an emission. Apparently both explanations should be offered for their presence.

MECHANISM PRODUCING MOVEMENT OF SPERMATIC FLUID

It has already been stated that there is an appreciable flow of spermatic fluid in the seminiferous elements in the tubules. The rapid distention of the seminiferous and collecting tubules in the testis following ligation of the vasa efferentia also indicates that there is a continuous movement of spermatic material from the testis. What causes the movement of this fluid? Obviously, it is moved along by the production of more material in the same way that any secretion is forced along in its ducts. The cellular elements are carried along passively in the fluid from the testis into the epididymis. Spermatozoa are inactive while in the testis, and their progress from the testis into the epididymis must be accounted for in the same manner.

The tubules of the epididymis are lined with ciliated epithelium. The immediate assumption from this is that the column of spermatic fluid with its cellular content is wafted along by the cilia. This has been offered as a theory to explain how spermatozoa are transported in the genital tract. Benoit [9] has reported that the epididymis secretes a substance which nourishes and activates the sperm. He found that spermatozoa are more active in the tubules at the tail of the epididymis than they are at the head end. In this way, he adds another explanation to account for the progress of spermatozoa from the testis to the urethra. The nature of this secretion has not been ascertained. Its presence was claimed by Benoit because of the increased motility of the spermatozoa as described, and because he found certain acidophil granules in histologic sections of the epididymis. I have been unable to detect the increased motility of spermatozoa found in the tail of the epididymis over those in the head end. I have not been able to demonstrate the motility of spermatozoa taken from any part of the epididymis before physiologic sodium chloride solution is added. It is not until a drop of 0.9 per cent salt solution has been added to a drop of spermatic fluid, placed on a slide under a compound microscope, that the appearance of motility can be observed. I am inclined to view this resulting motility as a product of the sudden change in chemical and ionic relationships. Nor would only motility of spermatozoa account for their progress through the tubules of the epididymis. They would also have to be endowed with the ability to orient themselves or to respond to some specific chemical attraction if their motility were to be of use in transporting them through the epididymis and vas deferens. Their movement in salt solution is chaotic and must be directed if their motility is to account for their progress through the tubules. If it is assumed that the spermatozoa are motile, a further difficulty arises in interpreting how the cilia can move them toward the urethra. This difficulty arises because it has been found that spermatozoa swim against the movements of the cilia in the vagina.

Nor does the postulate of spontaneous activity of spermatozoa account for the movement of the other cellular elements occasionally found in the epididymis or for the movement of the fluid content of these tubules. Carbon and other inert substances injected into the collecting tubules of the testis are later found in the proximal portion of the vas deferens. Their progress is not to be accounted for by any epididymal secretion causing them to become active. The cilia cannot be denied a possible share in this movement, but there is no need of invoking the aid of cilia in the presence of a more powerful factor.

The column of seminiferous fluid forces itself along. In the same manner that this fluid is forced through the vasa efferentia by the continued production of the material in the testis, it is forced through the tubules of the epididymis. The continued production of spermatogenic material exerts considerable pressure before seminiferous activity ceases. In experiments involving ligation of the vasa efferentia, the pressure produced in the testis is often great enough to rupture the tough tunica albuginea.[3] The continued production of this fluid and of cellular elements forces the column along the tortuous tubules of the epididymis. In experiments involving ligation of the vas deferens,[10] a similar pressure is found in the vas deferens and in the epididymis. In numerous experiments of this type, I have found large cysts of spermatogenic material near the end of the resected vas deferens when the latter has been ruptured. This great pressure cannot be ascribed to ciliary activity. Since this pressure exists in the collecting tubules of the testis, its origin is evident. There is here, then, the true mechanism causing movement of the spermatic fluid and its cellular elements.

It was said before that the epididymis is supplied with motor nerves, and that stimulation of these nerves causes a decrease in its volume. This is true not only when the hypogastric nerves are stimulated but also spontaneously.[11] Waddell has observed rhythmic movements of the vas deferens. These movements result in diminution of tubular volume, and probably aid in moving the column of spermatic fluid through the tubules during copulation. A series of these contractions passing from the epididymis to the urethra during copulation moves the spermatic fluid through the tubules. These contractions are the mechanism for the transportation of spermatic fluid during copulation.

In summary it can be said that the spermatic fluid is propelled through the collecting tubules, the epididymis and the vas deferens by the formation of more secretion. The cilia may aid in the movement of spermatic fluid through the epididymis, but their influence is insignificant in comparison with the force exerted by the spermatic material itself. Motility of spermatozoa probably does not function in the progress of the fluid content or of the spermatozoa through the tubules. Normally there is a constant movement of spermatic fluid through the epididymis and the vas deferens into the urethra. As a consequence, spermatozoa are found in the urethra and in the urine. There is no considerable storage of spermatozoa in the genital tract. The supply of spermatozoa is continuously renewed, and the old material is pushed forward and ejected. During copulation there is an increased rate of emission. This is caused by contraction of the muscles of the epididymis and vas deferens including the ampulla, which decreases the volume of the tubules and forces the spermatic fluid to the urethra. Here the secretion of the seminal vesicles is added.

Congress and Honore streets.

9. Benoit: Compt. rend. Soc. de biol. **84**: 951, 1921; **85**: 946, 1921.

10. Oslund (footnote 1); Am. J. Physiol. **70**: 111 (Sept.) 1924.

11. Waddell (footnote 5). King, C. E., and Oslund, R. M.: Am. J. Physiol. **70**: 106 (Sept.) 1924.

THROMBO-ANGIITIS OBLITERANS (BUERGER)

III. PROGNOSTIC VALUE OF THE OSCILLOMETER *

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A general impression prevails that the prognosis in thrombo-angiitis obliterans is invariably bad, and that amputation of one or more extremities is inevitable. This pessimistic attitude is justified if one is guided only by the observations made on the course of the disease in untreated patients. In a recent publication on this point [1] it was stated that 77 per cent of 155 untreated patients followed for five years had suffered one or more amputations. The outlook under treatment, however, is much better, and the percentage of amputations can be very materially reduced. The prognosis in each case depends on the degree of involvement, but it is not possible to determine accurately the degree of involvement by clinical signs alone. We have classified our cases according to the extent of impaired circulation present on first examination as revealed by measurements with the Pachon oscillometer. Such a classification is accurate and simple. It separates the cases that will respond rapidly to treatment from those in which only slow improvement can be expected. To illustrate the value of this method for prognosis, we present the outcome in 124 treated cases that have been observed for periods of from three months to four and a half years.

The technic of the use of the Pachon oscillometer has already been described at length by one of us.[2] Briefly stated, the oscillating needle of the instrument measures, at the level at which the cuff is applied, the expansion of the limb due to pulsation of the vessels. Measurements are always made for both lower extremities, and when the unaffected limb is normal the measurement serves as a control by which to judge the degree of impairment in the affected extremity.

We have divided our 124 cases into two main classes: Group 1, in which the oscillometer reading at the ankle is 0.5 or more, and group 2, in which the reading is 0 or less than 0.5. The prognosis in all of group 1 is good. There have not been any amputations in this group, even though gangrene was already present in some cases. We shall demonstrate that in group 2 the outlook becomes progressively poorer as the clinical condition is more advanced.

These two main groups are further subdivided as follows:

1. Cases with positive oscillometer readings at ankle:
   - A. Cases with pain only.
   - B. Cases with pain and ulceration.
   - C. Cases with pain, ulceration and gangrene.
2. Cases with zero, or negative, oscillometer readings at ankle:
   - A. Cases with pain only.
   - B. Cases with pain and ulceration.
   - C. Cases with pain, ulceration and gangrene.

We present a report of the cases falling in the six subdivisions of these two groups with an illustrative case in each.

GROUP 1 A. *Positive reading and pain only.* Twenty of our cases fall into this group and all have shown rapid symptomatic improvement under treatment. In every case spontaneous pain (pain while at rest) was relieved within a few weeks. When coldness of the feet was a symptom, it was replaced by definite subjective warmth. Improvement in walking occurred coincidentally with relief of other symptoms, although as a rule favorable progress in this respect is rather slow. An illustrative case in this group was the following:

H. M., an Austrian Jew, aged 41, was suffering from pain in the right foot on walking. This symptom began one year before and was becoming steadily worse. The patient had smoked twenty cigarets a day for the past twenty years. Examination showed absence of pulsation in both feet. The oscillometer reading at the left ankle was 2 and at the right ankle 1.5. There was no ulceration. Under saline treatment and with cessation of smoking, rapid improvement took place. Within six weeks the right foot became warmer and the nails of both feet began to grow in a more healthy manner. Within four months, pulsations indicating the establishment of collateral vessels were found in both feet, and the patient was able to resume his occupation of butcher after an enforced idleness of about a year. Eight months after the patient was first seen, he was in excellent condition, able to walk five blocks easily and working regularly.

GROUP 1 B. *Positive readings, pain with ulceration.* In this group we have placed cases in which there was pain and one or more ulcerations of the toes or foot. Nine of these were observed, of which six were healed and the remaining three are healing. In the majority of these cases there was prompt relief of pain. The three unhealed ulcers were all of large size.

J. R., a Russian Jew, aged 47, a moderate smoker, came under observation with a painful ulceration of the right big toe, pain in this toe having begun two months previously. The condition was diagnosed as an ingrown toe-nail and the nail was removed. Following this operation the pain was greatly aggravated and the patient was unable to sleep. An ulcer formed at the site of operation and did not show any tendency to heal. Pulsation was not palpable in the right foot, but the oscillometer reading at the right ankle was 1. Within three weeks after the treatment was begun, the ulcer was completely healed. The pain was considerably lessened, and the right foot was distinctly warmer. Three weeks later all pain had disappeared, and a pulsation had appeared in the right foot; the patient resumed his previous occupation and has not had any recurrence of the pain during the eighteen months that we have observed him.

GROUP 1 C. *Positive readings, pain, ulceration and gangrene.* Three patients with definite gangrene but with oscillometer readings of 0.5 or more were seen. Two of these patients were advised by other surgeons that amputation was necessary. In all three the condition is completely healed and pain in every case has been entirely relieved.

V. D., an Austrian Jew, aged 50, a heavy smoker, had had for six years typical intermittent claudication in the right leg. In December, 1926, owing to pain in the toes, operations were performed, the nails of the first and fifth toes of the right foot being removed. Marked exacerbation of pain resulted. The patient was unable to sleep and lost a great deal of weight. When seen, in April, 1927, he had an area of ulceration and gangrene occupying the entire inner surface of the right little toe, with exposed tendons. In addition, a gangrenous ulcer occupied the entire bed of the right big toe-nail. The right foot was swollen and showed the typical glossy rubor characteristic of thrombo-angiitis obliterans. Pulsation could not be felt in this foot. The oscillometer reading at the right ankle was 1.5. On this basis a favorable prognosis was made and

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1. Silbert, Samuel: Studies on Thrombo-Angiitis Obliterans (Buerger): II. The Effectiveness of Therapeutic Procedures, J. A. M. A. **89**: 964 (Sept. 17) 1927.
2. Samuels, S. S.: The Value of Oscillometry in the Study of the Circulatory Disturbances of the Extremities, J. A. M. A. **88**: 1780 (June 4) 1927.

treatment by our usual method was started. Two months later the pain had noticeably diminished. The ulceration on the little toe was granulating and about three-fourths healed. In September, five months after treatment was begun, the little toe was completely healed and the ulcer on the big toe was reduced to 1 cm. in diameter. By November, both ulcers were completely healed. The pain had entirely disappeared, and the patient returned to his previous occupation.

Summarizing group 1, in which the oscillometer revealed evidence of considerable circulation, there were thirty-two patients, all of whom have made favorable progress. Amputation was not necessary in any case in this group. In group 2, however, in which the oscillometer reading was zero, the outlook is not so satisfactory.

Group 2 A. *Negative readings and pain only.* There were sixty-three cases in this group. Pain while at rest has been relieved in fifty-one cases, but more slowly than in group 1 A. Those who are still unrelieved have been treated less than six months. Intermittent claudication usually continues to some degree, but gradual improvement in walking is the rule. One patient in this group failed to respond to treatment, became progressively worse, and required amputation. The following case is a typical example of group 2:

H. F., a Polish Jew, aged 30, had been disabled for six months by pain on walking. For three weeks he had had constant severe pain in the left foot. He had smoked about twenty cigarets a day for sixteen years. On examination, pulsation could not be felt in the left foot, and there was no ulceration. The foot was swollen and glossy red and showed the characteristic signs of thrombo-angiitis obliterans. The oscillometer reading at the ankle was zero. Under treatment, gradual improvement took place. In about two months the pain while at rest was nearly gone, the foot was warmer and the patient had gained weight. Within six months he was able to resume part-time employment at his previous occupation. There was decided improvement in walking. Recent examination shows that the left foot is warm and that the nails are growing well, but there is still no pulsation.

Group 2 B. *Negative reading, pain with ulceration.* In this group the danger line begins to be approached. Ulcerations in these extremities, in which the circulation is obviously inadequate to maintain the nutrition of the tissues, may progress to gangrene and amputation. Twenty-two of our cases fall into this group. In thirteen of them the ulcers healed under treatment. Three cases progressed to gangrene and amputation.

H. S., aged 42, an Austrian Jew, had been observed for ten months. He had always been a heavy smoker, and his symptoms dated back twenty years. During this time, he had had pain and repeated ulcerations of the left foot. Two years before we saw him, gangrene of the left foot developed and amputation of the extremity was performed at Bellevue Hospital. One month before, an ulcer developed on the right big toe and after this intense pain prevented the patient from sleeping. No pulsation could be felt in the foot, and the oscillometer gave a reading of zero at the right ankle. Although the ulcer was small, continued treatment for nine months was necessary before it was completely healed. The pain gradually disappeared, and the patient is now back at work and self-supporting. Up to the present time, no pulsation has been felt in his foot.

Group 2 C. *Negative readings, pain, ulceration and gangrene.* It is in this group that the outlook is almost invariably bad. Five of the seven cases have come to amputation. In only two have we been able to save the extremity. The following case is typical of this group:

W. K., an Austrian Gentile, aged 41, whom we have observed for about fourteen months, gave the usual history of heavy smoking and stated that he had had intermittent claudication and pain in the right foot for four months. At the first examination, gangrene of the fifth toe of the right foot was present. There was no pulsation in the right foot, and the oscillometer reading at the right ankle was zero. In spite of treatment, gangrene progressed and the pain became unbearable. Amputation through the upper third of the right leg was performed six weeks after the patient was first seen.

Summarizing group 2, there were ninety-two patients with zero oscillometer readings at the ankle. All the nine amputations occurred in this group. These results are in striking contrast to the excellent outlook in group 1.

In order to check up the improvement in circulation, examinations with the oscillometer have been done at intervals of from two to three months. In many cases we have noted a steady improvement in the oscillometer readings coincident with subjective evidences of improvement. However, we found that the symptomatic improvement under treatment with intravenous injections of hypertonic saline solution is greater than one would suspect from the changes that can be found with the oscillometer. Numerous patients who had a zero reading at the ankle at the time of the first examination continued to have a zero reading in spite of striking symptomatic improvement. Improvement in oscillometric readings is, however, valuable corroborative evidence of improved circulation.

Results of Treatment in Thrombo-Angiitis Obliterans

Condition	Number of Cases	Symptomatic Improvement	Oscillometric Improvement	Ulcers Healed	Amputations
Group 1					
A. Pain only	20	20	9	..	0
B. Pain with ulceration	9	9	3	6	0
C. Pain, ulceration and gangrene	3	3	2	3	0
Group 2					
A. Pain only	63	51	14	..	1
B. Pain with ulceration	22	17	3	13	3
C. Pain, ulceration and gangrene	7	1	0	0	5
Totals	124	101	31	22	9

SUMMARY AND CONCLUSIONS

1. The course of thrombo-angiitis obliterans has been followed in 124 cases for periods varying from three months to four and one-half years. These cases were studied with the oscillometer in an effort to determine the prognosis.

2. Examination with the oscillometer frequently reveals pulsation when none can be felt on palpation.

3. When oscillometric examination shows pulsation at the ankle, the prognosis for the relief of symptoms is good, even if ulceration or actual gangrene is present.

4. If examination with the oscillometer gives a zero reading, the prognosis for saving the extremity becomes worse as the process is more advanced. In this group, if gangrene is already present, the outlook is poor.

55 East Eighty-Sixth Street—164 West Seventy-Ninth Street.

Science of Medicine.—The methods and accumulated results of all sciences must be used in pursuing the science of medicine. That some of these sciences are more closely related to medicine in their methods and fields of endeavor than are others is obvious. Biology, comparative anatomy, embryology, bacteriology, protozoology, certain branches of botany, anthropology, human anatomy, human physiology, psychology, and even certain aspects of the social sciences, have many close affiliations with medicine.—Cole, Rufus: *Science* **67**:50 (Jan. 20) 1928.

OBSTRUCTION OF THE CYSTIC DUCT OF A CATARRHAL VARIETY

SHOULD A POSITIVE CHOLECYSTOGRAM BE ALWAYS CONSTRUED TO MEAN A PATHOLOGIC CONDITION OF THE GALLBLADDER OF SURGICAL DEGREE?*

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The last decade, remarkable for its many notable discoveries of importance, has been featured by the advancement in our knowledge of the physiology of the biliary tract and by the introduction of new methods of diagnosing and treating its states of disease.

As an outcome of Abel and Rowntree's [1] studies with the phthaleins, the discovery and development of cholecystography by Graham and Cole [2] marked a most important forward step. By means of it, we have been better able to study the gallbladder itself in health and disease, to estimate its function in several directions, and to increase our ability to separate the surgical from the so-called medical gallbladder.

During the three years since the discovery was announced that certain halogenated dyes when given intravenously permitted direct visualization of the gallbladder by the roentgen ray, cholecystography has been steadily perfected and made safer by its originators, and has been internationally adopted by roentgenologists, surgeons and internists, who have published the results of thousands of observations.

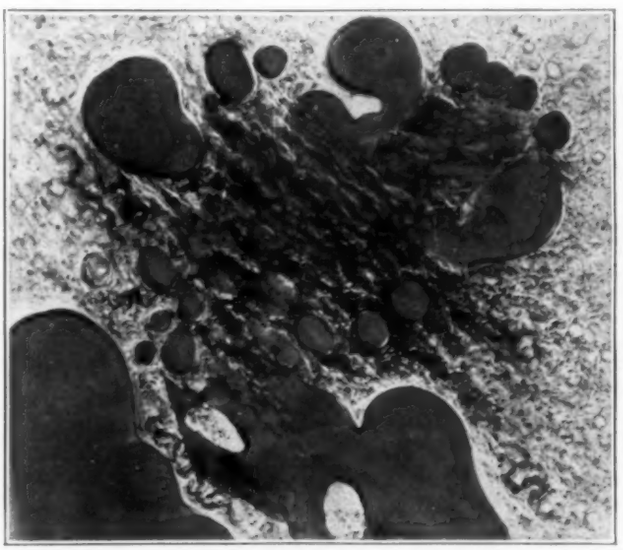

Fig. 1.—Microscopic picture believed to be pathognomonic of cystic duct obstruction when due to catarrh; characteristic features are noted in text.

By means of cholecystography, it has been possible to substantiate again the work of Rous and McMaster [3] on the concentrating function of the gallbladder; to throw further doubt on the intriguing hypothesis of Sweet [4] and of Halpert [5] that bile and its contents entering the gallbladder by way of the cystic duct never thereafter leaves the gallbladder as such but is absorbed in some manner within the gallbladder; to help those experimentally inclined to study the effect of various food products in stimulating the gallbladder to eject its contents (Boyden,[6] Whitaker [7]), and to prove our contention that gallbladder bile can be discharged by the intraduodenal use of magnesium sulphate,[8] of olive oil (representing a concentrated fat), and of peptone (representing one product of protein digestion), and also by the use of oleic acid and other substances.

All these various substances—indeed, even lipogenous foods—when given intraduodenally (and also intragastrically) vary considerably in their stimulative effect in securing gallbladder drainage, and in certain patients give quite inconsistent response. For instance, where today in one patient 15 cc. of melted butter or 30 cc. of cream or egg yolk will produce excellent gallbladder drainage response, tomorrow they may be less effective than magnesium sulphate, and vice versa. Whitaker comments on the fact that the motor power of the gallbladder is distinctly diminished in a sick cat or dog. In regard to the effects of magnesium sulphate stimulation, certain studies (Silverman and Menville,[9] Whitaker [7] and others) have shown that there is increased emptying of the gallbladder when the magnesium sulphate solution is introduced directly into the duodenum as compared with its emptying when this salt is taken by mouth or introduced directly into the stomach.

Cholecystography has quickly established itself as the most logical method of diagnosis of the sick gallbladder. It is a method that appeals to us because of its simplicity, ease of demonstration and high degree of accuracy. Judged by papers of report, its accuracy in diagnosis ranges between 90 and 100 per cent. We believe that subsequent events will show that these figures are too high, and that cholecystography, like any other single method of diagnosis, has its limitations as well as certain possibilities of error, one of which we discuss here.

We have felt that such a method could be relied on to detect late pathologic changes in the gallbladder but we are doubtful of its ability to recognize cholecystitis in its infancy. This brings up the crux of the issue, namely, What is meant by grade 1 cholecystitis and where does it begin? If it begins in the gallbladder wall, cholecystography will perhaps be able to detect the earliest recognizable stage; if it begins in the mucosa, cholecystography is obviously of less help as a means of early diagnosis when compared to a properly done duodenal drainage study of the bile tract. Intelligent biliary drainage will detect the dysfunction of the gallbladder in concentrating or emptying as accurately as the cholecystogram. In this respect, they check nicely. In fact, it can go further, as we hope to show.

If a positive cholecystogram is always indicative of a pathologic condition of the gallbladder demanding

* Read before the American Gastro-Enterological Association, Atlantic City, May 3, 1927.

* Owing to lack of space, this article is abbreviated in THE JOURNAL by the omission of some of the illustrations. The complete article appears in the reprints, a copy of which may be obtained on application to the authors.

1. Abel, J. J., and Rowntree, L. G.: J. Pharmacol. & Exper. Therap. **1**: 231, 1909.
2. Graham, E. A., and Cole, W. H.: Roentgenologic Examination of Gallbladder, J. A. M. A. **82**: 613 (Feb. 23) 1924.
3. Rous, Peyton; and McMaster, P. D.: J. Exper. Med. **34**: 47 (July) 1921.
4. Sweet, J. E.: Internat. Clin. **1**: 187 (March) 1924.
5. Halpert, B.: Med. Klin. **20**: 408 (March 30) 1924.
6. Boyden, E. A.: Anat. Rec. **30**: 333, 1925.
7. Whitaker, L. R.: Experiences with Cholecystography, Including Observations on Functions of Gallbladder, J. A. M. A. **86**: 239 (Jan. 23) 1926; Am. J. Physiol. **78**: 411 (Oct.) 1926.
8. Lake, M.: Am. J. M. Sc. **174**: 786 (Dec.) 1927.
9. Silverman, D. N., and Menville, L. J.: Observations of Visualized Gallbladder by Graham Method, J. A. M. A. **84**: 416 (Feb. 7) 1925; Surg. Gynec. Obst. **41**: 284 (Sept.) 1925.

surgery, how is it that such a positive diagnostic test can be converted into a normal, or negative, one in certain cases? If this be done, is it because of an error in the diagnostic interpretation of the cholecystogram or a result of improvement in function brought about by duodenal drainage?

Before going further, it would now seem appropriate to state briefly the generally accepted diagnostic interpretation of a negative and a positive cholecystogram as

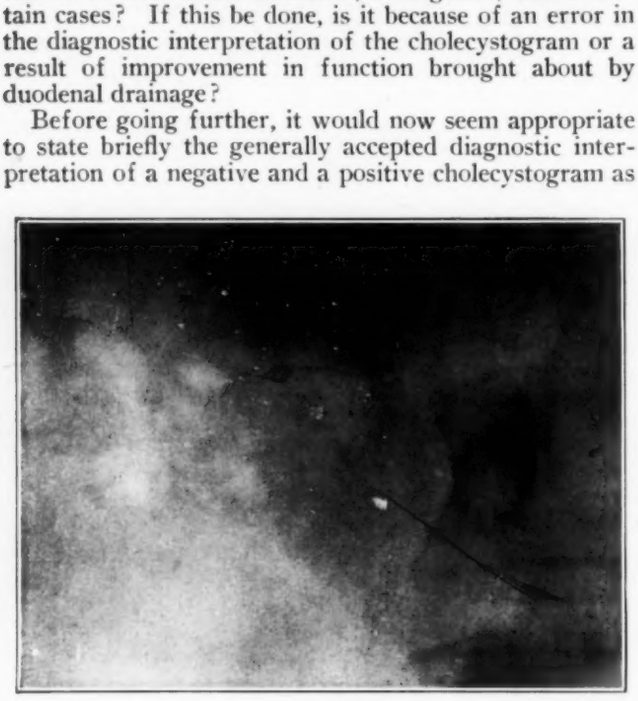

Fig. 2 (case 2).—"Positive" cholecystogram, Nov. 8, 1926, oral, seventeen hours, in M. E., a man.

judged from a review of the literature. In a patient with a normal liver, normal gallbladder and unobstructed ducts, the dye introduced either intravenously or by mouth reaches the liver, passes out in the bile, enters the gallbladder by way of the cystic duct, is visualized by the roentgen ray, increases its density of shadow and is gradually discharged from the gallbladder, all within reasonably established normal time limits unless the gallbladder emptying is accelerated as a result of food products reaching the duodenum, particularly those rich in fats, such as cream, butter and egg yolk. It has been found, too, that variations in the size, shape and position of the gallbladder, as well as its rate of emptying, bear a definite relation to the general habitus of the patient. The essentials, then, of a negative cholecystogram suggesting normal health of the gallbladder consist of its proper filling, its proper concentration, and its proper rate of emptying of the dye, especially when responding to the influence of the Boyden meal, with evidence of normal contractility and absence of deformity of the gallbladder wall.

The positive cholecystogram interpreted to indicate disease of the gallbladder consists in (1) failure of visualization of the gallbladder suggesting either (*a*) an obstruction of the cystic dust or (*b*) a gallbladder content made up of a solitary calculus or thickened gallbladder mud (d'une veritable boué, of the French writers), so static as not to receive a fresh admixture of dye-stained bile; (2) a partial visualization of the gallbladder with mottled areas suggesting calculi or positive or negative shadows of gallstones, in which instance it may be inferred that the cystic duct is not completely occluded; (3) an imperfect visualization of the gallbladder with failure of the dye to concentrate, suggesting disease of the gallbladder sufficient to impair this function; (4) delayed filling, concentrating or emptying of the gallbladder, or a deformed silhouette suggesting adhesions. A positive cholecystogram, therefore, is inferentially accepted as an indication of gallbladder disease requiring surgical intervention. Here lies a possibility of three errors in diagnosis of considerable importance to the patient. The first, and by far the less common one, is disease of the liver preventing excretion of the dye in sufficient concentration. The second possibility, of more frequent occurrence, may be a dysfunction of the duodenum or of the termination of the common duct producing abnormal relaxation of either of them, whereby the dye-laden bile passes out directly into the duodenum and so prevents visualization of the gallbladder. Furthermore, if the oral method is used, disturbed absorptive power of the intestine may in some instances contribute to poor visualization; or, if diarrhea occurs, intestinal hypermotility, interfering with proper absorption, may be a factor. These possibilities we will leave for future consideration. The third and quite common possibility of error concerns obstruction of the cystic duct by catarrh or inflammatory edema, an obstruction which may be either partial or complete. To this we shall return presently. Obviously, any of these conditions may prevent visualization of the gallbladder and account for cases in which a normal gallbladder is found at operation. It is quite true that the intravenous administration of the dye in such cases tends to minimize the frequency of this error of interpretation; nevertheless, it can occur despite this method of use.

Contrary to the view regarding the pathogenesis of cholecystitis, advanced particularly by Graham [10] to the effect that disease of the gallbladder usually begins in the serosa and walls as a result of infection carried from the liver by the network of lymphatics, we believe that the initial portal of entry is quite as often by way of the mucosa rather than the serosa, with infection carried by the bile stream or ascending by way of the common duct. In a recent paper particularly developing this point of view, one of us pointed out the desirability of investigating the portal of entry in cholecystitis by a study of the microscopic evidence of abnormal cellular exfoliation, inflammatory products, and infection; in other words, a

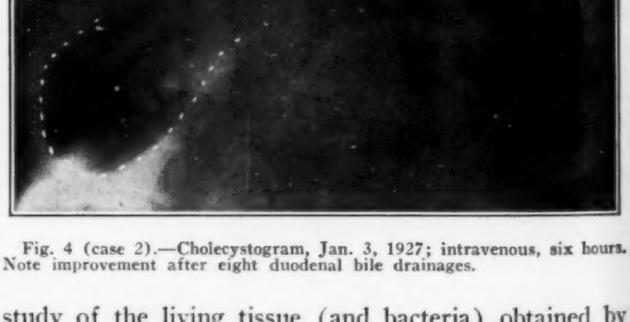

Fig. 4 (case 2).—Cholecystogram, Jan. 3, 1927; intravenous, six hours. Note improvement after eight duodenal bile drainages.

study of the living tissue (and bacteria) obtained by duodenal biliary aspirates.

We find that such abnormal tissue is demonstrable, group 1, in many patients who are entirely free of clinical symptoms or physical or roentgen-ray signs of gallbladder involvement at the time of their original examination but who later on, if untreated, develop definite gallbladder disease; group 2, in patients who on their first examination presented themselves with somewhat nondescript complaints, sometimes suggesting

10. Graham, E. A.: Surg. Gynec. Obst. **26**: 521 (May) 1918. Graham, E. A., and Peterman, M. G.: Further Observations on Lymphatic Origin of Cholecystitis, Choledochitis and Associated Pancreatitis, Arch. Surg. **4**: 23 (Jan.) 1922.

so-called biliousness or nervous indigestion, with belching, flatulence, often slight nausea, but no confirmatory physical signs of cholecystitis and negative roentgen-ray observations by usual methods until the introduction of cholecystography demonstrated that many of them responded to the dye test with a positive cholecystogram; group 3, in patients with histories and physical signs and positive cholecystograms quite suggestive of definite cholecystitis, with or without stones; and group 4, in patients who on history and physical examination alone, or such examination supplemented by roentgen-ray study, gave an unmistakable

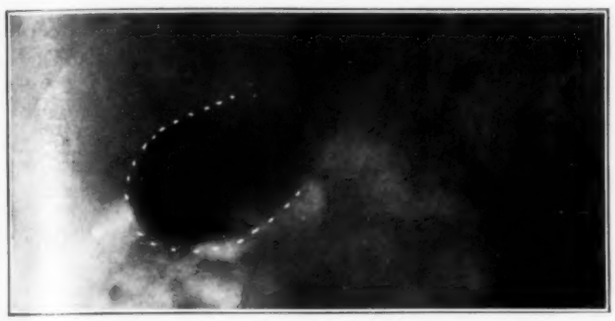

Fig. 5 (case 2).—Cholecystogram, Jan. 18, 1927; intravenous, six hours. Note further improvement after ten drainages.

clinical picture of acute cholecystitis, usually without stones, or chronic calculous cholecystitis, upper right quadrant adhesions and evidence of associated intra-abdominal lesions. These four groups somewhat parallel the clinical classifications of cholecystitis laid down by Cheney [11] and others, and in our opinion represent the transitions from grade 1 to grade 4 disease. As a result of our microscopic observations in all four groups, we believe that such histologic abnormalities frequently exist in many so-called normal persons, representing the breeding period of grade 1 or grade 2 cholecystitis, and therefore such conditions antedate by many years the development of living pathologic structures.

In a previous article, we [12] directed attention to a possible sequence of events which took place in the establishment of cholecystitis when due to infection, expressing our belief that, as in many other diseases of the gastro-intestinal tract, the mucosa rather than the serosa is primarily injured; in that paper, we made substantially the following statement:

In the early beginnings of cholecystitis and choledochitis, the reaction to low grade inflammation or to subinfection is at first a catarrhal process involving the mucous membranes, with an outpouring of mucus, abnormal denudation of the gall tract or duodenal (or pyloric) epithelium, and abnormal numbers of bile-stained lymphocytes or polymorphonuclear leukocytes, depending on the degree and acuteness of the inflammation. In many instances, the process in this early stage is purely catarrhal, but may involve any portion of the gall tract from the liver cells down to the termination of the common duct. If the latter predominates, obstruction of the choledochus takes place and catarrhal jaundice ensues. This is well known.

But we particularly wish to point out that, in our opinion, this early catarrhal process in many cases may be localized chiefly in the cystic duct and so produce abnormal retention of gallbladder bile with resultant injury to the gallbladder mucosa and walls. This condition is recognizable by only two diagnostic procedures: biliary tract drainage study or Graham's cholecystogram method. The latter method, however, cannot differentiate between cystic duct obstruction due to catarrh and that produced by adhesions, stone impaction or stricture, whereas cystic duct obstruction when due to catarrh gives an abnormal drainage sequence and a characteristic microscopic picture. Such obstruction may be partial or complete. Either no B (gallbladder) fraction is recovered, or it is recovered only in small amounts, and is then accompanied or preceded by the discharge of characteristic flocculi of yellow brown mucus, in shaggy, slimy masses. Microscopically, this mucus will be found unusually dense; often twisted or spiraled (as we think by the rifling of the cystic duct) and encrusted with bile salts; but the important finding is an oleaginous material, ranging from pale to bright yellow, which melts out into globules, pools and lakes. By chemical tests, this lipoid appears to be a fatty ester of cholesterol (fig. 1). When infection has taken place and inflammation progressed beyond the catarrhal stage, there will be found, in addition, bile-stained colonies of culturally viable bacteria, collections of pus cells and often increased exfoliation of bile-stained columnar epithelium.

We believe that this microscopic picture is pathognomonic of cystic duct obstruction when due to catarrh, and in many cases appears to be one of the earliest signs of grade 1 cholecystitis, as well as a condition which often accompanies the later grades of pathologic change. The pathogenesis of this condition is at present unknown, although recent studies of Kodama [13] on the lymphatics of the extrahepatic biliary passages, and of Mentzer [14] on cholesterosis of the gallbladder appear to bear somewhat on the subject. We have gained the impression that there must be several factors concerned in the formation of this oleaginous material. We have noted that in very early stages the droplets are small and translucent gray, appearing like neutral fat globules, whereas in the well developed picture the

Fig. 7 (case 2).—Cholecystogram, Jan. 18, 1927; intravenous, nine hours. Note further improvement after ten drainages.

brilliant chrome yellow is the most striking feature. Apparently this taking on of color is a gradual transition, brought about by as yet unknown factors, because we see the smaller translucent droplets becoming faintly yellow tinted and gradually more yellow as they coalesce. Some degenerative process in the mucus strands containing epithelioid cells seems to play an important part, for it is frequently observed that the oleaginous material melts out from within the depths of the mucus and spills over in pools along the edges. Warmth seems to hasten the process. It has impressed us that there may

11. Cheney, W. F.: Am. J. M. Sc. **160**: 469 (Oct.) 1920; Diagnosis of Gallbladder Disease, J. A. M. A. **78**: 1281 (April 29) 1922.
12. Lyon, B. B. V.: Memphis M. J. **3**: 67, 1926; Presse méd. **87** 1361, 1926.
13. Kodama, Shuichi: Surg. Gynec. Obst. **43**: 140 (Aug.) 1926.
14. Mentzer, S. H.: Am. J. Path. **1**: 383 (July) 1925.

be some chemical difference in the cells lining the cystic duct by which they elaborate a different type of mucous floccules than those furnished from the other extrahepatic ducts.

Several years ago (1919-1920), when, in the course of a biliary tract study, the senior author encountered a patient (of group 1 or 2 as previously described) in whom no B bile was recoverable after one or two drainage attempts (and in whom this microscopic picture was

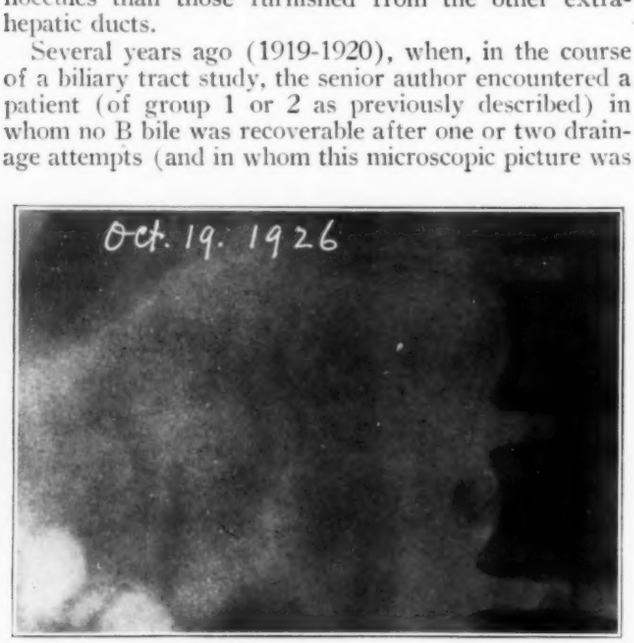

Fig. 9 (case 3).—"Positive" cholecystogram, Oct. 19, 1926; oral, seventeen hours.

observed but not then understood), he concluded that such a case was beyond the scope of nonsurgical therapy and referred a number of these patients to the surgeon. It was disconcerting to observe, however, that the surgeon could not demonstrate any visible evidence of disease in the gallbladder and therefore refused to drain or remove it, doing an appendectomy if the appendix had not already been removed. It was observed that several such patients after a lapse of one or more years developed more conspicuous gallbladder symptoms, which again brought them to the operating table, at which time gross pathologic changes in the gallbladder or its contents were easily demonstrable. This suggested to us that such a catarrhal process might represent one of the earliest stages in the life cycle of cholecystitis, and might be cured if energetically treated by duodenal drainage. Shortly thereafter (1921-1923) in similar cases of catarrhal cystic duct obstruction in which operation was refused, we agreed to undertake a program of nonsurgical management. We found that after a series of drainages the slimy flocculi giving this oleaginous microscopic appearance lessened, and on the second to sixth or further drainage we recovered an excellent specimen of B bile suggesting that we had unblocked the cystic duct to a point sufficient to permit the gallbladder to empty in response to duodenal stimulation of magnesium sulphate, peptone or olive oil. Simultaneously with this recovery of B bile, there usually occurred a noticeable improvement in several of the presenting complaints (upper right abdominal soreness and pressure distress; belching, nausea, pyrosis and flatulence). It was also noted that when this cystic duct obstruction had been overcome, some patients could return to a fat-full diet to which previously they had been intolerant. We observed, however, that the objective manifestations of microscopic abnormalities often persisted long after symptoms disappeared, and that unless drainages were given at frequent intervals, from once to thrice weekly, relapses in symptoms—paralleling increased microscopic abnormalities—would occur. As a result of this observation, a schedule of more continuous drainage was worked out about 1923, and reported[15] first in 1925, together with the greatly improved results which it gave us. Even during this period, it was noted in several cases that a roentgen-ray shadow of the gallbladder by the older methods, then taken to indicate disease of the gallbladder wall, could be made to disappear after a course of therapeutic medical drainage.

Shortly after Graham announced his method of cholecystography in 1924, we realized that this would be a most useful method of proving our suspicion that cystic duct obstruction due to catarrh, with its characteristic microscopic appearance, might give a positive cholecystogram suggesting a pathologic gallbladder of a surgical degree and that, if we could free the cystic duct of its obstructing catarrh by duodenal drainage, we should be able to demonstrate the conversion of this positive cholecystogram into a negative, or so-called normal one, provided only a grade 1 cholecystitis associated with cystic duct catarrh existed.

Our reasoning was as follows: In the patient in whom no B bile was recovered after one or more diagnostic drainages, we felt that we had secured evidence of (*a*) cystic duct obstruction; (*b*) possible atony of the gallbladder; (*c*) some disturbance in the neuromuscular balance between the gallbladder and the sphincter of Oddi, or some pathologic stiffening or increased tonicity of the duodenal wall; and (*d*), a gallbladder choked with stones or static bile (gallbladder mud). Attention was then directed to differentiating these possibilities by a critical review of such factors as the history, physical and roentgen-ray observations, and chemical and serologic reactions of the blood. In some cases we became convinced that the chief reason for failure to recover a B bile from the gallbladder was that the cystic duct was obstructed, and in this event a cholecystogram should be positive.

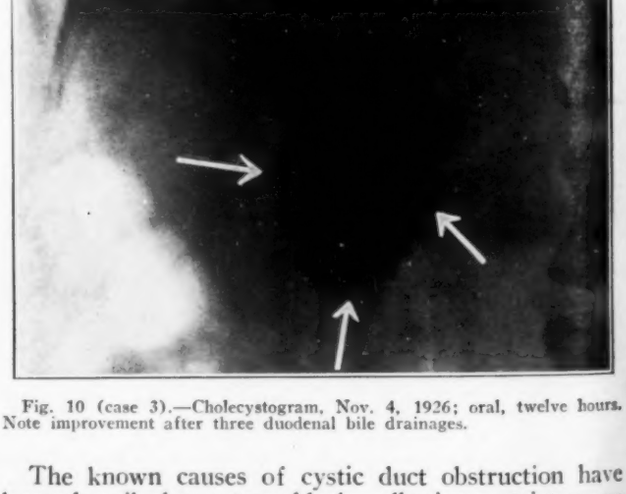

Fig. 10 (case 3).—Cholecystogram, Nov. 4, 1926; oral, twelve hours. Note improvement after three duodenal bile drainages.

The known causes of cystic duct obstruction have been described as stone block, adhesions, stricture or angulation of the duct, or pressure on the duct from without (gland, tumor, etc.). To this list, we believe catarrh or inflammatory edema of the cystic duct should be added. A spasm of the cystic duct has been advanced as a further possibility, which, however, is difficult or impossible of verification. Of these various factors,

15. Lyon, B. B. V., and Swalm, W. A.: Therapeutic Value of Nonsurgical Drainage of Biliary Tract, J. A. M. A. **85**: 1541 (Nov. 14) 1925.

we felt that if impacted stone was the cause, our attempt at drainage should be accompanied by, or followed by, an attack of pain like that of gallstone colic. In certain cases this transpired, and we sometimes recovered the stone in the sieved stool, or minute fragments of it in our drainage bottles. It was conceivable, although insusceptible of proof, that by repeated drainages we might reduce the size of a swollen lymph node sufficiently to release its pressure on the cystic duct. We felt that obstruction due to stricture or old adhesions

Fig. 13. (case 3).—Cholecystogram, Dec. 16, 1926; intravenous, seven hours. Note improvement in filling and concentrating, but delayed emptying after eight drainages.

involving the duct would probably not be influenced by drainages repeated ad libitum. But none of the foregoing causes of obstruction of the cystic duct need be confused with that due to catarrh if the microscopic picture described may be accepted as pathognomonic.

In our attempt to prove its existence as a heretofore undescribed entity, we turned for help to the cholecystographic method. We assumed that (*a*) if the cystic duct was completely obstructed, no dye could enter the gallbladder; (*b*) if partially obstructed, only faint shadows of the gallbladder should be secured which might be inferred to mean either insufficient filling or poor concentrating function of the gallbladder, or (*c*) a mottled appearance might be due to calculi with an admixture of dye stained bile. We found that not infrequently the last two conditions may exist at the same time as cystic duct catarrh. We next assumed that if such a positive cholecystogram was obtained in a case of catarrhal cystic duct obstruction, we must prove that we could change it into a negative cystogram at any period after we had succeeded in getting a good B fraction after a series of drainages.

This we have succeeded in doing in several cases, as attested by the accompanying comparative cholecystograms. From the standpoint of such factors as the history and the physical conditions, all the patients so far studied belonged in group 2. We are conscious of the fact that there is one point in this paper which can readily be criticized, namely, that the patients studied have been given tetraiodophenolphthalein by both the oral and the intravenous route. The results might be made more convincing if only one method of administration had been used on each patient. This we intend to do in subsequent cases.

There is also a possibility that the lipoid material microscopically demonstrable in drainage aspirates may be derived in some cases from the cholesterol deposits in the mucosa of the so-called strawberry gallbladder, and that in this event the failure to visualize the gallbladder by cholecystogram and failure to recover a recognizable B fraction may be due to a loss of concentrating ability of the injured mucosa. Under such circumstances the return of a normal cholecystogram and a recognizable B bile would seem to indicate that duodenal drainage is able to improve or arrest this type of gallbladder disease if treatment is instituted in time. However, we believe that this supposition, although it cannot be entirely discarded, is obviously not the only explanation of the source of this oleaginous material because we have found the same characteristic microscopic appearance in several cases in which a cholecystectomy had already been done. This again brought up the question as to whether other portions of the duct system could furnish this oleaginous material. We still believe, however, that it is more commonly endogenous to the cystic duct and that its demonstration in such cholecystectomized individuals might mean that the cystic duct had been ligated near the neck of the gallbladder rather than nearer the junction of the common duct, thus leaving behind a sufficient portion of the cystic duct to permit the budding outgrowth or aneurysmal-like pouching of the proximal end of the cystic duct, as demonstrated by Sweet. We have also recently approached this phase of the question by scraping the mucosa of forty-three gallbladders (obtained by operation or autopsy) representing various grades of cholecystitis and have thus far failed to observe the well developed picture of the chrome yellow lipoid, although occasionally translucent gray droplets have been seen.

SUMMARY

As a result of this study, we believe that:

1. Catarrhal obstruction of the cystic duct is of common occurrence. It may be partial or complete. It occurs frequently in grade 1 cholecystitis, but may also be present in later grades of disease.
2. It does not give a characteristic symptomatology.
3. Its presence is indicated by a characteristic microscopic picture of biliary drainage aspirates.
4. This form of cystic duct obstruction can be differentially diagnosed only by biliary drainage study.
5. When the catarrhal obstruction is complete the Graham cholecystogram will be positive, thus suggesting

Fig. 14 (case 3).—Cholecystogram, Dec. 16, 1926, intravenous, twenty-four hours. Note improvement in filling and concentrating, but delayed emptying, after eight drainages.

cholecystitis of a surgical degree. But by means of repeated biliary drainages, it has been possible to change such a positive into a negative, or normal, cholecystogram.

6. This condition may account for some cases in which operation was performed on the basis of a positive cholecystogram but in which the surgeon was unable to demonstrate disease of the gallbladder.

7. Patients with catarrhal cystic duct obstruction, unassociated with other pathologic change, do not require surgery but will regain normal gallbladder function by means of nonsurgical biliary tract drainage.

8. It is therefore obviously desirable that the patient in whom disease of the galltract is suspected should be studied by both biliary drainage and the cholecystogram, if the welfare of the patient is given first consideration.

9. When the obstruction has been overcome by duodenal drainage, the patient may return to the fat-full diet to which he had previously been intolerant.[16]

328 South Twenty-First Street.

FRACTURES OF THE CLAVICLE

A SIMPLE FIXATION DRESSING, WITH A SUMMARY OF THE TREATMENT AND RESULTS ATTAINED IN NINETY-TWO CASES *

H. EARLE CONWELL, M.D.

FAIRFIELD, ALA.

The material used in this simple dressing for fractures of the clavicle consists of four pieces of adhesive (4 inches wide by 48 inches long), one pad of cotton, and a small circular pad of felt (3 inches in diameter). For children, these dimensions vary according to the size of the child.

Fig. 1.—Applicating of adhesive strip 1. This pulls the shoulder back, ading approximation of overlapped fragments. The hand of the uninvolved side should remain on top of the head throughout the whole period of applying the dressing.

Fig. 2.—Felt pad and adhesive strip 2 being applied. This procedure prevents an exaggerated upward misplacement of the proximal fragment.

Fig. 3.—The cotton prevents coaptation of skin surfaces and acts as a fulcrum to the arm and strip 4 in relieving any overlapping of fragments.

Fig. 4.—Adhesive strip 3 being applied. This raises the arm and shoulder, thereby aiding further approximation of the downward misplaced distal fragment. Cotton should always be applied underneath the elbow.

Application of the dressing is made as follows: After the chest has been shaved and cleansed with ether, the patient is placed in a sitting position with the hand of the uninvolved side on top of the head, or being supported by an assistant if an anesthetic has been given. The arm of the injured side should be, and usually is, against the side of the chest with the forearm resting in the patient's lap. Adhesive strip 1 is then applied. This strip (fig. 1, 1*A*) commences in front, just at the point of fracture of the distal fragment. With the aid of an assistant and with the patient's cooperation, the shoulders are pulled backward, tension being made on adhesive strip 1, which is carried out and around the upper part of the arm on the injured side, then in and diagonally across the back to the opposite axilla, extending underneath the latter, then around in front, crossing both sides of the chest and terminating about 2 inches below the nipple line on the injured side (fig. 1, 1*B*). This strip pulls the injured shoulder backward, thereby tending to approximate the fragments by correcting any overlapping.

The felt pad is applied directly over the fracture, the pad being held in place with a small piece of adhesive tape (fig. 2).

Adhesive strip 2 (fig. 2) commences in the median line of the abdomen, a few inches above the umbilicus, and extends diagonally up the chest on the injured side, over the felt pad. With the application of considerable tension on the adhesive, it is then extended diagonally down the back to the median line, terminating usually at the lumbosacral region. This strip should be applied only after the patient has taken a deep expiration. Adhesive strip 2 aids in preventing any tendency of an upward misplacement of the fragments, this misplacement usually being more marked in the proximal fragment as a result of the action of the sternocleidomastoid muscle.

A large cotton pad is now applied in the axilla (fig. 3) which aids in pulling the distal fragment outward and at the same time separating the skin surfaces of the arm and chest. The forearm is flexed nearly to an acute angle at the elbow and placed against the chest. While the opposite ends of strip 3 are held widely apart, it is first applied (fig. 4) to the inferior surface of the elbow, after a small piece of cotton has been applied to the latter. With considerable tension, the front and back halves of the adhesive strip are brought up the corresponding surfaces of the arm, meeting and overlapping over the shoulder near the middle third of the clavicle (fig. 5). This strip pulls the shoulder upward, thereby aiding further approximation of the distal fragment, which is usually displaced downward.

Strip 4 commences on the back, at the midaxillary line of the opposite side in the region of the ninth and tenth ribs (fig. 6). It extends horizontally across the back to the involved side around the arm about 4 inches above the olecranon process, then across the forearm and base of the wrist, ending where it commenced, that is, in the midaxillary line of the opposite side. Cotton should be placed between the skin surfaces of the forearm and chest, and also between the adhesive strip and the forearm. When moderate tension is applied to strip 4, the distal fragment is pulled outward, the cotton

16. The question of the rationale of a fat-full diet in gallbladder and galltract disease will be considered in a subsequent paper.

* From the Orthopedic Clinic, Employees' Hospital, Tennessee Coal, Iron and Railroad Company.

pad in the axilla acting as a fulcrum. This piece also aids in stabilizing the arm and forearm, making a support for the latter.

None of the dressing has to be removed for reinforcement except strip 4. All the reinforcements are done by applying similar pieces of adhesive plaster over the original ones. The dressing is very comfortable, cool and efficient.

This series of ninety-two cases of fracture of the clavicle which is being presented occurred over a period of four and one-half years; all were treated at the orthopedic clinic of the Employees' Hospital. Ninety-one were simple fractures and one was compound. Seventy-nine were transverse fractures; three were comminuted; seven were oblique, and three were green-stick. Forty-five were on the right and forty-seven were on the left side. Twenty-three were in the outer third, sixty-four were in the middle third, and five were in the inner third of the clavicle. Nineteen cases were complicated by injury to the shoulder joint, and four were complicated by injury to the sternoclavicular joint. The average age was 26.6 years. In thirty-nine cases there was marked overlapping and misplacements of the fragments. Traction was used in thirty-two cases, some form of ambulatory dressing being used later.

Fig. 5.—Adhesive strip 3 applied.

Fig. 6.—Adhesive strip 1 crossing the back obliquely around to the front of the chest from the uninvolved side of back and axilla. The termination of adhesive strip 2 and the commencement of adhesive strip 4 are shown. The latter passes horizontally across the back, then across the lower third of the arm on the involved side, and then around in front across the forearm (see fig. 7). The posterior application of strip 3 is also shown.

Fig. 7.—The completed dressing, showing the elbow flexed with the forearm against the chest and adhesive strip 4 horizontally crossing the arm and forearm ending at the point where it commenced. Cotton should always be placed between skin surface and the adhesive strips and the forearm.

The final position was good in fifty cases, fair in thirty-seven and poor in fifteen. Functional results were excellent in seventy-five cases, fair in twelve and poor in five.

Traction with the arm in a right angle abduction splint (devised by the author) and 90 degrees of external rotation at the shoulder joint [1] was used in every moderate or severe injury to the shoulder. Traction was also used with success in those cases which showed marked overlapping and the cases that were complicated by involvement of the sternoclavicular articulation.

Open reductions were done in three cases for marked overlapping of the fragments, but in no case was it necessary after the development of the traction method.

Different forms of ambulatory dressings were used; however, there were failures in every type to pull the overlapping fragments in place as well as a frequent misplacement for those cases which had been properly reduced. Considerable pain and discomfort from these dressings were also encountered as a result of pressure, interference with circulation, irritation of the skin, bulkiness and other complications. In the majority of the cases in which the adhesive dressing or the traction method was used, none of these complications were encountered.

All fixation was removed at the earliest possible moment, and hot baths and active and passive motion were commenced.

1. Conwell, H. E.: Treatment of Acute Comminuted Fractures About the Elbow Joint, South. M. J. **20**: 579-585 (Aug.) 1927.

SUMMARY

1. When good position of a fracture of the clavicle is present without a joint complication, it is best treated by the simplest of ambulatory dressings.

2. Perfect anatomic position is not always necessary for perfect functional results.

3. It is very doubtful whether the average ambulatory dressing holds a fracture of the clavicle in position if the fragments have a marked tendency to be displaced.

4. Any ambulatory dressing that would hold a fracture of such a type in place usually would have to be applied so tight that grave danger to the circulation would result, as well as great pain and discomfort to the patient, with the possibility of pressure necrosis.

5. Traction should be used when there is a marked overlapping of the fragments in fracture of the clavicle or when there is a great tendency for these fragments to become misplaced.

6. Shoulder joint complications should always be eliminated in every clavicle fracture; when present, they should be treated with the arm in abduction and external rotation with the patient in bed, some form of an ambulatory dressing being used later.

7. Open reductions should never be done until traction has been given a fair trial.

8. Hot baths with active and passive motion are of great aid following removal of the fixation dressing.

5060 Parkway.

Play Necessary for Mental and Physical Development.—For years play was looked on merely as a sort of inevitable waste of time among children, but scientific study of the cultivation of these organisms has shown that play is in most respects the best, the ideal form of the exercise of the powers. . . . The young child perhaps learns more and develops better through its play than through any other form of activity. Opportunity for varied play under healthful outward conditions is beyond doubt the chief need of children; comparative study of the mental and physical development of children to whom full opportunity for such play is given shows striking superiority, as compared with children to whom such opportunities are denied.—Jennings: Suggestions of Modern Science Concerning Education, p. 46.

PRECOCIOUS PUBESCENCE AND MENTAL GROWTH

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Does precocious sexual maturation have a demonstrable effect on the curve of mental development? The problem is of theoretical and also of practical significance. There is a vague, popular view, sometimes uncritically shared by the physician, that adolescence is a time when the backward child "outgrows" his retardation. The implication behind this optimism is that puberty produces some activator which will give a special impetus to mental growth.

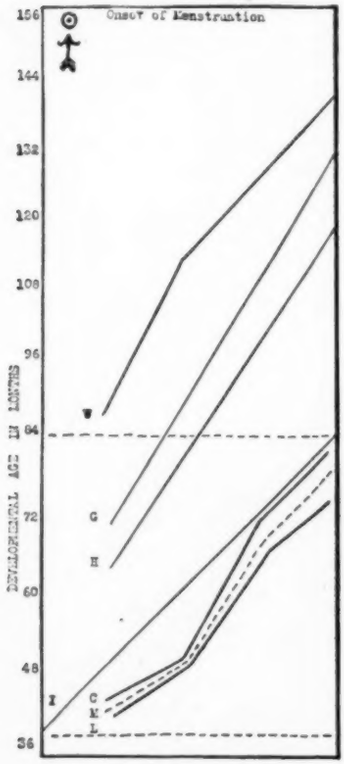

Fig. 1.—Growth curve of patient 1, showing wide dispersion of developmental components. Maturity levels are indicated vertically; chronological age horizontally in months. Mental development was not accelerated by precocious pubescence: *W*, weight; *G*, grip; *H*, height; *I*, ideal average of psychophysical growth; *C*, comprehension; *M*, mental level by clinical estimate; *L*, language.

We have had an opportunity to inquire into this question in two well defined cases of puberty praecox at the Yale Psycho-Clinic. One of these girls has been under our observation four years, the other five years. We have made periodic mental measurements to determine the curve of mental growth, and these data have been reported in detail in a monograph dealing particularly with the psychologic aspects of the problem.[1] The outstanding observations are briefly summarized here because of their medical interest.

CASE 1.—J. B., a girl, began to menstruate at the age of 3 years, 7 months. Regularity of menstruation was promptly established and has continued. Enlargement of the breasts was noted before her first birthday. At 4 years she was 42 inches tall; at 7 years, 52 inches. The corresponding weights were 50 pounds (22.7 Kg.) and 73 pounds (33 Kg.). Her statural development therefore has been definitely in advance of her chronological age. Her statural configuration was that of a mature woman as early as 4 years of age. Her facial appearance and general deportment, however, did not suggest any marked departure from the normal. She attends a primary school and passes for an ordinary pupil.

Detailed mental examinations were made when the patient was 4, 5, 6 and 7 years of age. The results of these examinations are brought into comparative view in table 1 and in the accompanying chart. The developmental ratings are expressed in terms of developmental age level as determined by psychometric tests or by a clinical estimate. The summarizing estimate of the general mental level is based on a careful clinical weighing of numerous data furnished on each examination by means of an application of the diagnostic schedules in use at the Yale Psycho-Clinic. The schedules and norms are based on a study of several hundred normal children in the early stages of development.[2]

The patient speaks with a voice rich in timbre and deep in tone, and she has a grave, restrained poise somewhat unusual for one of such tender years. This subdued gravity has a thick, lethargic quality which is not childlike. The emotional complexion of her mental life has been somewhat altered by her unusual physiologic status. Superficially, however, she leads the life of ordinary children of her age, in her play interests, her amusements and her social intercourse with playmates of either sex. Puberty praecox has not had any striking effect on her emotional behavior.

TABLE 1.—*Summary of Developmental Examinations at Four, Five, Six and Seven Years of Age in Case 1*

Chronological age at examinations	(1) 4 yrs.	(2) 5 yrs.	(3) 6 yrs.	(4) 7 yrs.
Developmental Items..	Approximate Developmental Age Levels			
Height	5½ yrs.	7 yrs.	.....	10 yrs.
Weight	7½ yrs.	9½ yrs.	.....	11½ yrs.
Grip (right hand)	6 yrs.	.....	.....	11 yrs.
Carpal ossification	6 yrs.	4 yrs.	6 yrs.	7 yrs.
Drawing	4 yrs.	4½ yrs.	5½ yrs.	7 yrs.
Drawing of man	3½ yrs.	4 yrs.	6 yrs.	6 yrs.
Language and vocabulary	3½ yrs.	4 yrs.	5½ yrs.	6 yrs.
Digit recall and Knox tube test	4 yrs.	4 yrs.	7 yrs.	10 yrs.
Number sense	3½ yrs.?	4 yrs.	5½ yrs.	6 yrs.
Play interests	4 yrs.?	5 yrs.?	6 yrs.	7 yrs.
School report	.....	.....	Average	Average
Reading	.....	.....	6 yrs.	7½ yrs.
General developmental level	3¾ yrs.	4 yrs.	5½ yrs.	6½ yrs.

Fig. 2.—Appearance of patient 1 at 4 years of age.

In the sphere of general intelligence, there has not been any evidence of acceleration. Indeed, the second examination, at the age of 5 years, suggested a retardation, which proved to be temporary. Viewing the whole period from 4 to 7 years,

1. Gesell, Arnold: The Influence of Puberty Praecox on Mental Growth, Genetic Psychol. Monogr. **1**: 511 (Nov.) 1926. Thoms, H., and Hershman, A. A.: A Case of Sexual Precocity, Am. J. Obst. & Gynec. **6**: 349 (Sept.) 1923.

2. Gesell, Arnold: The Mental Growth of the Pre-School Child: A Psychological Outline of Normal Development from Birth to the Sixth Year, Including a System of Developmental Diagnosis, New York, Macmillan Company, 1925.

it is clear that in general mental development this girl has consistently cleaved to the average or fallen somewhat below, in spite of the precocious onset of puberty and the regular recurrence of full menstruation.

CASE 2.—B. E., a girl, was born one month prematurely. Her mother had suffered an attack of pneumonia one month prior to the child's birth. The patient walked at 2 years. Full menstruation began at the age of 8 years 3 months, and has continued with regularity since. Roentgenograms of the skull, as in the preceding case, were negative as to causal factors.

Developmental examinations were made at 6, 8, 10 and 11 years of age. The results are summarized in table 2. At 11 years of age, a careful appraisal of the emotional characteristics of the patient was made by comparing them with those of normal children 3 and 4 years of age. This objective, comparative study showed that in depth, range and quality, the emotional life of the patient was actually less mature than that of young children of comparable mental age. In respect to general intelligence, the developmental quotient (chronological age divided by development age) has remained consistently between 30 and 35, during the whole period of five years. It follows, then, that sexual precocity has not had any marked effect on mental maturation.

Fig. 3.—Appearance of patient 2 at 8 years of age.

COMMENT

If the two cases of puberty praecox here reported are typical, we may conclude that precocious displacement of pubescence does not carry with it a coordinate deviation in the curve of mental growth. Stature and physical configuration are apparently more affected than the nervous system and the functions which underlie mental maturation.

TABLE 2.—*Summary of Developmental Examinations at Six, Eight and Ten Years of Age in Case 2* *

	Examination 1	Examination 2	Examination 3	Examination 4
Date	11/30/21	2/27/24	4/29/26	3/29/27
Age	5 yr. 9 mo.	8 years	10 yr. 2 mo.	11 yr. 1 mo.
Height	41½ in.(5 yr.)	.....	52 in.(10 yr.)	54½ in.
Weight	40½ lb.(5 yr.)	.....	93 lb.(14 yr.)	98½ lb.
Language	Words and phrases Names five objects (2)	Sentences pronouns past, pleural (3)	Uses descriptive words (4)	Volume of speech somewhat greater than on exam. (3)
	Points to nose and eyes Tells sex (2+)	Comprehends propositions (3)	.....	Comprehends 3 commissions (5)
Performance	Solves form-board with error (2—)	Solves without error (3—)	Builds partial gate (3+)	Attempts to fold paper diagonally but fails
Drawing	Differentiates between stroke and scribble (2—)	Partial copy of circle (3—)	Draws good circle (3+) Draws crude man (3+)	Very slight improvement
Personal habits	Feeds self (2—)	Puts on shoes (3)	Goes on simple errands (4)	Moves about less
Approximate developmental level	2¼ years	2¾ years	3½ years	3½ years
Developmental quotient	32	31	35	32

* The figures in parentheses indicate the estimated developmental level.

Growth is not a homogeneous, indivisible process which is chiefly conditioned, as some have suggested, by sexual development and differentiation. Growth is a complex of many components. The components interact, but there is also a high degree of specificity, even of independence, among these components. Pubescence is one factor which plays its part, but not with unlimited autocracy. It affects the emotional aspects of mental life more than the intellectual.

The nervous system among all the organs of the body manifests a high degree of autonomy, in spite of its great impressionability. It is remarkably resistant to adversity, even to malnutrition. This relative invulnerability gives it a certain stability in the somatic competition between the organ systems. It tends to grow in obedience to the inborn determiners, whether saddled with handicap or favored with opportunity. For some such biologic reason, the general course of mental maturation is only slightly perturbed by the precocious onset of pubescence.

52 Hillhouse Avenue.

CHRONIC ULCERATIVE COLITIS

OBSERVATIONS OF TREATMENT BY DIET *

JOSEPH W. LARIMORE, M.D.
ST. LOUIS

The clinical cure effected in a case of chronic ulcerative colitis by the use of vitamin rich foods led to the observation of subsequent patients on a similar diet. More or less initial increase in the diarrhea was controlled by the liberal use of camphorated tincture of opium (paregoric) or codeine. These drugs could soon gradually be reduced and discontinued. Bismuth salts have also been used in most of the cases. All cases have shown a definite healing reaction of the mucosa by proctoscopic observation, and the roentgenologic observations have shown a progressive improvement. Cases in the early stages of the condition have shown clinical, roentgenologic and proctoscopic cure. Cases in the later stages have shown great improvement, and the observations are being continued. This group, of which several cases are reported in abstract with illustrative roentgenograms, has been studied from the point of view of disordered physiology—hypermotility, impaired colonic absorption, local (colonic) malnutrition, and abnormal muscle function. These disorders operate in a vicious circle. The largely determining rôle of nutrition in the integrity of the colon in this condition, especially of its mucosa, seems demonstrated and appears dependent on the vitamin rich foods. The healing reaction of the mucosa has been prompt in all cases. This suggests some revision of the conception of the pathogenesis of the condition.

REPORT OF CASES

CASE 1.—A patient observed two weeks after relapse, following an interval of fourteen months' freedom from ulcerative colitis, gave all the clinical, proctoscopic and roentgenologic signs of the condition (fig. 1). With the sole treatment of a liberal soft residue diet enriched by tomato juice and cod liver oil, a complete return to normal colonic motility and stool form occurred in ten days. After five weeks the rectal mucosa

* Read before the American Gastro-Enterological Association, May 3, 1927.

* From the Department of Medicine, Washington University Medical School.

was normal; occult blood had disappeared from the stools, and the patient had gained 6 pounds (2.7 Kg.). There was a clinical cure in that short period. Roentgenologically, the repair of the colon did not proceed so rapidly, and after sixteen months, during which the patient had steadily gained 20 pounds (9 Kg.), the distal colon did not show a normal diameter. The usual haustral and peristaltic forms appear

Fig. 1 (case 1).—Barium enema, prior to treatment and two weeks after a relapse of diarrhea following a "normal" interval of fourteen months. The tubular contracture involved all segments except the cecum, and there was marked muscular irritability. Proctoscopic examination showed a contracted, narrow rectum with an edematous mucous membrane having many small shallow ulcers and generally coated by a flaky, gray exudate. The stools, from six to eight daily, showed mucus and blood. The patient's weight was 124 pounds (56.2 Kg.).

and indicate a functional repair of the intrinsic neuromuscular apparatus. The greatly increased tonic posture of the muscle makes this patient yet liable to a relapse (fig. 2).

CASE 2.—The benefit of a vitamin rich diet was strikingly demonstrated in a middle aged man with an early ulcerative colitis. There had been a lifelong tendency to diarrhea, and an achlorhydria was demonstrated repeatedly during the previous three years of observation. The diarrhea was not of the morning type, and was unaffected by hydrochloric acid administration. Diet had been markedly and increasingly restricted since childhood. In spite of all the usual medical measures the condition had progressed, with from four to seventeen stools occurring daily and showing blood, mucus and pus. The addition of vitamin rich vegetables to the diet produced complete compensation of function within ten days, with disappearance of occult blood. The patient has remained clinically well for two years. Observations secured by request now show a persisting achlorhydria and an irritable colon (fig. 3). The diet during the winter was not adequately varied, and the irritation contour of this colon was characteristic of an avitaminosis, prompt improvement occurring with the patient's return to a vitamin rich diet (fig. 4).

CASE 3.—A young man had all segments of the colon involved. Careful treatment by others had shown that all measures were ineffective, including the use of heterogeneous vaccine filtrates. Ileostomy seemed to be the next measure in treatment. It was allowable to observe the effects of the vitamin rich diet and this was instituted; opium sedatives and bismuth were also continued. This patient promptly gained 12 pounds (5.4 Kg.), which he has held. The mucous membrane as promptly became granulating instead of ulcerating, and the stools have gradually diminished from ten and fourteen to two and three daily (fig. 5). They have seldom since shown blood. The condition of the musculature has improved, but the heightened posture of tonus has not relaxed, and the anatomic characteristics have not returned sufficiently to be encouraging as to the ultimate outcome (fig. 6).

CASE 4.—In an elderly man, who, when first observed, showed involvement of the left colon, there was a progression of the disease to involve the transverse colon also during a two months' absence from observation and advice. The total time elapsing before treatment was five months. A diet of liberal soft residue food, including tomatoes, lettuce and peaches, and cod liver oil was given. Opium and bismuth salts were used. Two blood transfusions were given. Improvement, slow in commencing, was continuous. The stools lessened from twenty to two and three daily. The mucosa became granulating and clean. There was a gain of 44 pounds (20 Kg.) in three months. This has been held. A marked improvement in the anatomic status of the bowel was shown roentgenologically. The diminished diameter or contracture is lessening.

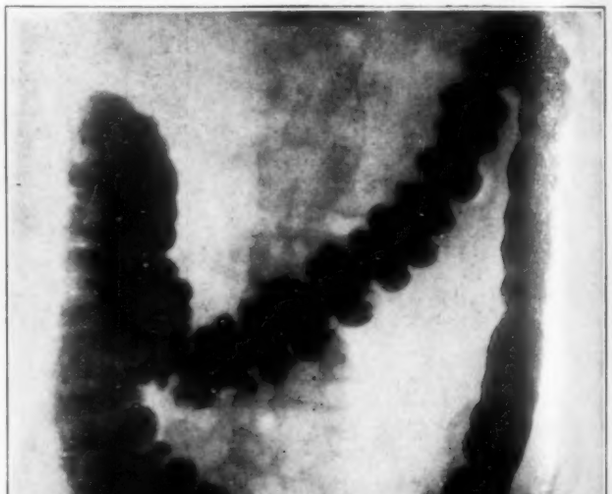

Fig. 2 (case 1).—Barium enema after fifty-seven weeks. Observations during this time showed a continuous return of the anatomic character of the normal colon, but with very slow lessening of the contractured posture of the distal musculature. This posture was accompanied by a heightened sensitivity of the muscle and favored a relapse of the diarrhea. It was necessary to keep the stools soft because of this status of the muscle.

CASE 5.—A middle aged man had the proximal segments of the colon involved and extremely narrowed (contractured). The symptoms had continued seven years. No notable improvement had occurred by general measures, and by the administration of vaccine filtrate instituted elsewhere. No notable improvement followed the dietetic treatment. An

ileosigmoidostomy was made. Colectomy could not be completed because of the patient's reaction at the operation. Death occurred three days after operation. Autopsy showed that the mucous membrane of the involved segments had been replaced by cicatricial tissue without any epithelium. This healing was complete. Transition from this to the normal bowel was abrupt. Necrosis, rather than healing, had occurred in the

Fig. 3 (case 2).—Barium enema, secured by request, after two years of "normal" function, and at a time when there was a tendency to frequent defecation associated with a reversion to a limited diet. The serrated haustral contours show the irritability of the bowel, and are characteristic of avitaminosis. Gastric achlorhydria persists.

abdominal incision, demonstrating the extreme malnutrition of the tissue cells generally. The muscular coats of the colon showed histologically a slight replacement fibrosis.

COMMENT

Observers are agreed that chronic ulcerative colitis is usually, if not always, a sequel to some initial insult, which is often of determinable etiology. This institutes and leaves a disturbance of function in the involved segments. These factors in the vicious circle of altered total function are interrelated and interdependent, and it is all but impossible to consider them separately. The hypermotility progresses from the irritable neuromuscular peristalsis of the first stage (fig. 3) to the hypersensitive disordered contraction of the later stages (figs. 1 and 5). Absorption is forestalled by the hypermotility and impaired by the injury to the mucosa and lymphoid tissue. McCarrison's [1] classic studies have demonstrated the injury to the intestinal mucosa by an avitaminosis. Cramer [2] has shown that the atrophy of lymphoid tissue is among the first effects of vitamin deficiency, and also that "the condition of the intestinal mucous membrane varies, even on natural diets, with the richness of the diets in vitamins." Wolbach and Howe [3] show that the scorbutic state is characterized by the inability of the cells of the supporting tissue to produce and maintain intercellular substance.

The musculature of the colon progressively changes from its neuromuscular functional status in the first prodromal stage (fig. 3) to the spastic irritable muscle of the intermediate stages (figs. 1 and 5) and to the contractured muscle in the late stage, the latter showing only very late some atrophy and fibrosis. Woodward [4] comments on "the little or no tendency toward the development of a fibrillated matrix, a fact which explains why it is that the possibility of resolution and ultimate recovery always remains, even in those cases of chronic dysentery in which there has been ulceration and sloughing, except when too large an area of the mucous membrane has been destroyed." The residual contractured posture of muscle tonus (figs. 2 and 6), with or without neuromuscular integrity, persists in early as well as in late cases, even when by all other criteria cure is complete. This factor tends to a relapse of the syndrome. Hurst [5] has emphasized the need of maintaining by diet a soft stool in cured cases of this condition. The relation of the intrinsic nerve tissue of the bowel, its irritability, degeneration, and disappearance in the various stages need further observation.

The operation of the vicious circle of malfunction has been shown by its correction through diet and protective

Fig. 4 (case 2).—Barium enema after nine weeks of a diet corrected by enrichment with more vitamin containing foods. Bowel function returned to normal, with one soft, formed, adequate stool daily.

measures to be independent of the problems of a specific or nonspecific bacterial etiology. The defense and the healing reaction of the mucosa have constantly

1. McCarrison, Robert: Studies in Deficiency Diseases, London, Frowde-Hodder-Stoughton, 1921.
2. Cramer, W.: On Mode of Action of Vitamins, Lancet **1**:1046-1050 (May 26) 1923.
3. Wolbach, S. B., and Howe, P. R.: Intercellular Substances in Experimental Scorbutus, Arch. Path. & Lab. Med. **1**: 1-24 (Jan.) 1926.
4. Woodward, J. J.: Medical and Surgical History of War of Rebellion, 1861-1865, Washington, Government Printing Office, 1870.
5. Hurst, A. F.: Ulcerative Colitis, Guy's Hosp. Rep. **71**: 26 (Jan.) 1921.

improved in the cases observed. Grant [6] has demonstrated the permeability of the intestine to bacteria as related to the disturbed ratios and deficiencies of vitamins C and D. The inflammatory reaction occurs in the mucosa. The muscle shows only the slightest round cell infiltration, and only in very late cases a scant diffuse polymorphonuclear invasion.

The conception that vitamin deficiency is a factor in diarrhea and may be a factor in severe colitis is not new, except that it can be an underlying and largely determining factor in this severe colitis, which from some points of view appears to be an infectious process. Grundzach [7] predicates a colitis avitaminosa from his clinical observations in chronic diarrhea. Attention to the dietaries of groups of people and also to the habits of many individuals suggests a vitamin poor status of their nutrition. They are at best without reserves and on the threshold of vitamin deficiency. This becomes actual with adverse conditions. The observation in these cases demonstrated the tolerance of the bowel to a diet more varied and larger than is usually used in such conditions, and the resulting greatly increased tendency to healing of the mucosa. All vitamin rich

Fig. 5 (case 3).—Barium enema after two weeks of increased diet showing extreme irritability and tubular contraction. This had increased with the more varied vitamin rich diet. The stools persisted at the rate of eight daily. Proctoscopic examination showed a contracted rectum with an edematous, friable, superficially ulcerated mucous membrane, with much mucopurulent, sanguineous exudate. The weight of the patient was 130 pounds (59 Kg.).

foods have been used, and as yet no effort has been made to observe the influence of different vitamins or varied ratios. Great excess of vitamin B is essential. The relative importance of other vitamins is undetermined from these clinical observations. Woodward's [8] study of war records and material constantly connects the improvement and cure of diarrhea and dysentery with the inclusion in the dietary of the troops of fresh and raw vegetables. At the same time, the failure of medicinal measures is noted. The association of the "scorbutic state" with dysentery is emphasized, and corneal ulceration and the condition of xerophthalmia are described.

Fig. 6 (case 3).—Barium enema, after sixty-four weeks of dietetic treatment showing the extent reached by the continual widening and lengthening of the segments and the increasing flexibility of the wall with a suggested return of haustra. The stools decreased to two and three daily.

These observations have shown that the condition of ulcerative colitis improves inversely to the duration of the disease, with the addition to the diet of a type of food hitherto generally excluded in diarrheal states, these foods being those rich in vitamins. The healing reaction of the mucous membrane is prompt. The symptomatic improvement of this chronic diarrheal condition on restricted diet is only apparent and not actual. Such restricted diets are inadequate for maintaining or restoring tissue integrity. The acquired posture of increased tonus of the muscle persists, and is one of the factors tending to cause a relapse in chronic ulcerative colitis.

Beaumont Medical Building.

6. Grant, A. H.: Effect of Calcium, Vitamin C, Vitamin D Ratio in Diet on Permeability of Intestinal Wall to Bacteria, J. Infect. Dis. **39**: 502 (Dec.) 1926.

7. Grundzach, Ignacy: Chronic Diarrhea in the Light of Our Knowledge of Vitamins (Colitis Avitaminosis), Polska Gazette, Lekaroka, Warsaw, 1924, p. 226.

First Seriatim Study of Human Growth.—Philibert Gueneau de Montbeillard (1720-1780), known best for his work on ornithology, which forms a part of Buffon's "Histoire naturelle," inoculated his son for smallpox in 1766. This was fully fifty years after the introduction of the practice of direct inoculation against smallpox into western Europe, but thirty years before Jenner's discovery.—Scammon, R. E.: *Am. J. Phys. Anthropol.* **10**:330 (July-Sept.) 1927.

Clinical Notes, Suggestions and New Instruments

BROMIDE ERUPTION ON HARD PALATE

FREDERICK H. DILLINGHAM, M.D., AND LAWRENCE K. McCAFFERTY, M.D., NEW YORK

The cutaneous eruption which results from the ingestion of the salts of bromide and iodide is by no means rare. However, an eruption produced by the halogen group on the mucosa is unusually rare. So far as we can ascertain, there are only two references pertaining to this subject. In 1904, Dr. Lotta Wright Myers[1] reported the case of an infant, aged 6 months, who developed a very unusual bromide eruption after the ingestion of a small quantity of potassium bromide. The interesting feature in this case is the fact that the child developed a bromide lesion on the tongue. Dr. Myers stated that while a few cases simulating hers, from the cutaneous point of view, have been reported, there had not been any instances up to that time of a bromide eruption occurring on the mucous membrane from one of the bromide salts. Dr. Arthur Hall, cited by Dr. Lotta Wright Myers, had reported a similar eruption resulting from the ingestion of potassium iodide, in which there was one lesion on the tongue. These are the only two cases in which the halogen salts produced lesions on the mucous membrane so far as we can discover from the literature.

The case seen by us differed from these two in that the patient was an adult who developed lesions on the hard palate in association with characteristic lesions on the arms and legs. The patient was presented at the Academy of Medicine,

Fig. 1.—Characteristic lesions of bromoderma.

New York, before the Section on Dermatology. Prior to presentation, she was seen by Dr. Elias Abramowitz, who has had much experience with cutaneous manifestations produced by various drugs, but who, up to that time, had never seen an eruption of the mouth produced by any of the halogen group.

REPORT OF CASE

K. M., aged 50, a Russian Jewess, housewife, consulted Dr. Samuel Weiss for nervousness. Dr. Weiss prescribed a bromide mixture, of which she took three doses in one day, with subsequent nausea. The medicine was discontinued by the patient. A few days later, a cutaneous eruption developed on the arms and legs. The patient felt so bad at this time that she remained in bed. The eruption appeared on the roof of the mouth two weeks after she had taken the bromide mixture, or one week after the cutaneous eruption appeared.

When she was seen by us recently in the department of dermatology of the New York Polyclinic Hospital, having been referred by Dr. Weiss, she presented large elevated and crusted lesions on the arms and legs, from 25 to 30 mm. in diameter. When the upper plate of the mouth was removed,

Fig. 2.—Granulomatous lesion on the hard palate caused by bromide.

there were two grayish, granulomatous elevations, about 18 mm. in diameter, in the posterior aspect of the hard palate, slightly separated by the median line of the hard palate. These mouth lesions were somewhat painful.

We gave the patient tenth-normal saline solution intravenously according to Wile's technic and she improved rapidly. We therefore report this case as one of bromoderma occurring on the hard palate in an adult, in association with characteristic lesions of bromoderma on the body. All lesions promptly disappeared under saline therapy.

SUMMARY

Innumerable cases of halogenderma have been reported, only two of which occurred on the mucous membrane. According to Wile, Wright and Smith,[2] it was shown that ingested bromide displaced the chloride in the blood, and that apparently the kidney, readily filtering both chloride and iodide, reacted differently to the salts of bromine. These tend to be stored up after their ingestion, owing to their difficult filtration through the kidney epithelium. The constant ingestion and gradual storing up in the body of bromide (small amounts being eliminated through the bowel) leads to the clinical phenomena known as bromism. Knowles[3] states that any part of the cutaneous surface which was previously irritated is more prone to be the site of bromoderma. Our patient wore an ill fitting upper plate in her mouth, and the part of the hard palate that was involved was the place of greatest pressure. We are convinced that the bromoderma on the hard palate was produced by the friction of this plate against the mucous membrane.

114 East Sixty-Second Street.

1. Myers, Lotta W.: A Rare Bromide Eruption, J. Cutan. Dis. **22**: 231 (May) 1904.

2. Wile, U. J.; Wright, C. S., and Smith, N. R.: A Preliminary Study of the Experimental Aspects of Iodide and Bromide Exanthems, Arch. Dermat. & Syph. **6**: 529 (Nov.) 1922.

3. Knowles, F. C.: Unusual Cases of Bromide Eruption in Childhood, New York M. J., March 20, 1909.

CHARCOT'S FOOT *

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In the case of Charcot's foot reported here, the picture presented by the patient's feet, as shown in figure 1, was very striking. At first glance it suggested a developmental anomaly or the condition of feet that have been treated to some mutilating process, such as the classic foot binding in China. The patient's statement that he formerly wore number 10

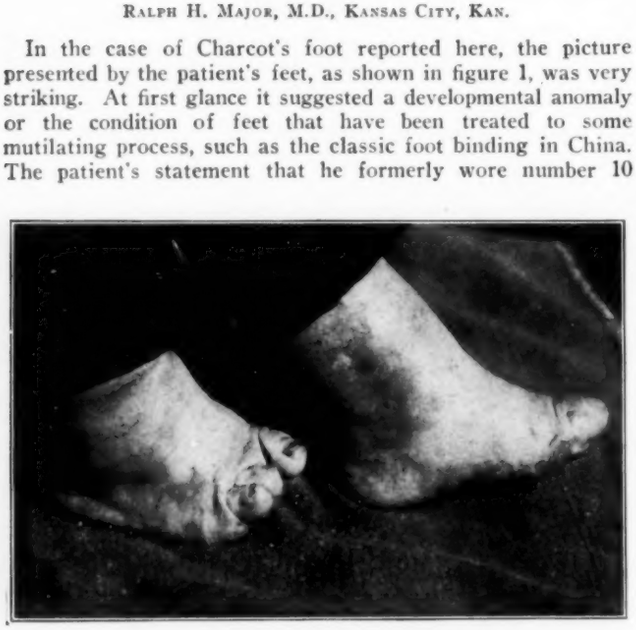

Fig. 1.—Appearance of feet in Charcot's disease.

shoes but now wore nothing larger than a 6 added at first to this confusion of the disease picture. A careful history with the results of the examination made clear, however, what the condition really was.

In 1910, the patient, then aged 46, weighed 350 pounds (159 Kg.) and wore number 10 shoes. He was at that time employed in an occupation that kept him on his feet a great deal, and calluses appeared on the soles of both feet. Following these calluses, an abrasion appeared on the ball of the right foot, which gradually, in the course of a few months,

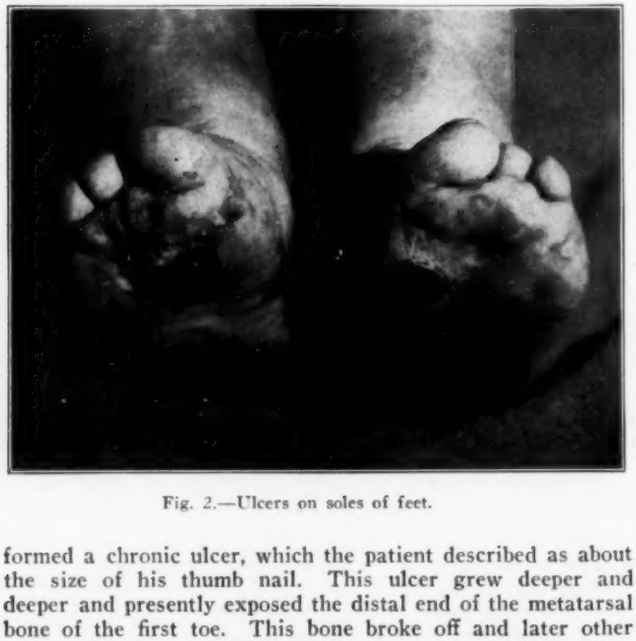

Fig. 2.—Ulcers on soles of feet.

formed a chronic ulcer, which the patient described as about the size of his thumb nail. This ulcer grew deeper and deeper and presently exposed the distal end of the metatarsal bone of the first toe. This bone broke off and later other pieces of bone were discharged from the base of the ulcer. A few months later, a similar ulcer appeared on the ball of the left foot and the same process was repeated, pieces of bone being discharged over a period of several months. The patient was much impressed by the fact that the process in both feet was entirely painless, although the feet were markedly swollen.

He consulted a physician at that time, who found, according to the patient's statement, that he had a positive Wassermann reaction and started him out on treatments consisting of mercury, iodides and arsphenamine. The condition of the feet gradually improved; the discharge of bits of bone ceased; the serous fluid which had been exuding from the ulcers disappeared, and the patient's feet seemed well, except for the presence of an ulcer on the sole of each foot, which persist at the present time. Following the discharge of the bones from the feet, the feet gradually became much smaller, "shrunk up" as the patient expressed it, until in the course of approximately two years they reached their present size.

Physical examination of the patient showed the right pupil to be larger than the left. The right pupil did not react to light and the left pupil reacted very sluggishly. Both pupils reacted actively in accommodation. The heart and lungs were clear. The blood pressure was 109 systolic and 73 diastolic. The extremities showed unusually small feet (fig. 1), both with ulcers on the soles (fig. 2). The knee kicks were absent.

The urine was normal except for a faint trace of albumin; the blood count was normal; the blood Wassermann and

Fig. 3.—Roentgenographic appearance of Charcot's foot, showing general distortion and small, loose pieces of bone scattered around bone of great toe.

blood Kahn reactions were negative; the urine did not show any abnormality, and the spinal fluid was negative for globulin and gave a negative Wassermann reaction.

Roentgen-ray examination of the feet (fig. 3) showed distortion involving the cuboid, navicular and cuneiform bones, the metatarsals and the phalanges, with almost total destruction of the phalanges and the heads of the metatarsals in both feet. There was no evidence of osteomyelitis. The plate also showed several small, loose pieces of bone scattered about the bones of the great toe in both feet.

The patient gave a history of a primary sore in 1892, which received only local treatment. This unusual picture is an example of Charcot's foot involving both extremities. The history of syphilitic infection, the development of ulcers on the soles of the feet, the painless arthritis with destruction of bone and the marked improvement under antisyphilitic treatment seems to make the diagnosis certain. The patient also has abnormal pupillary reactions, absent knee kicks and a positive Romberg sign. This condition, which is unusual, has been described by Knaggs,[1] who referred to ulceration on the sole of the foot, with discharge of sequestrums.

* From the Department of Internal Medicine, University of Kansas School of Medicine, Kansas City, Kan.

1. Knaggs, R. L.: The Inflammatory and Toxic Diseases of Bone, New York, 1926.

A NEW NEEDLE FOR FASCIAL SUTURING*

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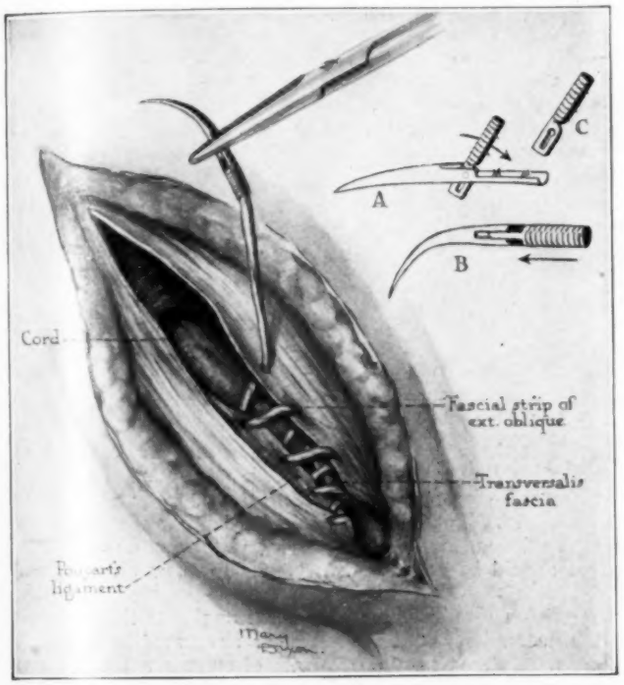
After witnessing numerous operations for the repair of inguinal hernias by the autoplastic method of Dr. L. L. McArthur, and after seeing the need of a more efficient means of fascial suturing, I designed the needle here described.

The shape of the needle may be either half curved, as shown in the accompanying illustration, or full curved if desirable. The needle is a bivalved hollow cylinder which



Technic of use of needle for fascial suturing: *A*, cylinder open; *B*, cylinder closed; *C*, keyhole slot in tongue of top half of cylinder.

opens and contains three rows of teeth. The end of the fascial suture, cut close to the muscle origin, is placed therein. The cylinder is closed and then locked by means of a locking hinge joint. This locking is accomplished through the medium of a square pin fixed in the body of the needle, which passes through a keyhole slot in the tongue of the top half of the cylinder. Thus, when the square pin is in the rounded end of the keyhole slot, the top half of the cylinder opens and closes like an alligator jaw. After the cylinder is closed, the top half is slid backward, thus slipping the rectangular portion of the keyhole slot over the square pin and locking the joint. The sliding of the top half of the cylinder is most easily accomplished by the use of tissue forceps with three teeth. The single tooth is inserted in the crevice between the top half of the cylinder and the solid body of the needle. The other half of the tissue forceps with the two teeth is hooked over the rear end of the lower half of the cylinder and pressure is applied.

This needle furnishes considerable aid in technic in that it grasps the end of the fascial suture directly, pulls it through Poupart's ligament with ease, and makes a hole about the size of the fascial suture without undue tearing or splitting of the fibers. As suggested by Dr. S. W. McArthur, after the needle has been pulled through the fascia, the suture strip is pulled taut and held by 6-inch curved forceps, the jaws of which are wrapped with cord tape to prevent crushing. This relieves the tension on the needle while the next suture is being made.

In using the needle precaution must be taken to grasp below the jaws of the needle with the needle holder, because the force of the holder will spring the jaws of the needle so that it will neither lock nor hold the fascia. An ordinary needle holder may be used if necessary, but one with the jaws hollowed to fit the needle is preferable and not so liable to damage the needle.

The accompanying illustration is in no way intended to demonstrate the technic of a radical hernia repair but merely to show how the needle is used. However, the reader should note that the cord is not transplanted and that the fascial suture has been taken from the lower flap of the external oblique muscle. Whether or not the cord is transplanted or the suture taken from either the upper or the lower flap or both is purely a matter of choice by the operating surgeon.

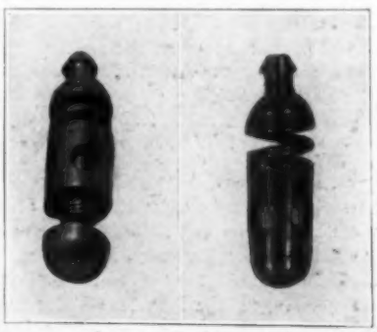
This needle has been used in approximately forty operations for hernia by the attending surgeons of Dr. McArthur's service.

* From the St. Lukes Hospital.

ANALYTIC BUCKET

MOSES EINHORN, M.D., NEW YORK

Further experimentation with my analytic bucket has revealed to me that the technic of attaching the gauze strips to the cavities in the bucket by means of melted paraffin is not the best that might be employed, and I have modified the bucket so that there is no necessity for attaching the test strips. As indicated at *A* in the illustration, the bucket is now constructed so that a space is left between the central column and the outer shell, and it is in this space that the paper test strips are inserted. There are four openings or fenestrae in the outer shell, so that the fluids may take effect on the test strips. The bottom of the central column is so threaded that the bottom of the bucket may be screwed to it. In place of attaching the gauze strips by paraffin, as was formerly necessary, the technician need now only to unscrew the bottom part of the bucket and insert in the space between the outer shell and the central column the paper test strips prepared with Töpfer's solution, phenolphthalein, blue litmus and benzidine which are used in this bucket. These paper strips are especially prepared, so that they exactly fit the openings provided for them. After making the test, the examiner may note the reactions of the strips through the fenestrae or openings provided for that purpose (*B*). After the test is finished, it is necessary to unscrew the bottom part and the strips are easily removed by a sharp pointed instrument. The advantages of this modification are that paper test strips are used; there is no more need of using paraffin to



Analytic bucket: *A*, space between central column and outer shell for insertion of strips of test paper; *B*, fenestrae for observation of reactions of test paper.

hold the strips, and there is no danger of the strips becoming loosened or falling off. The bucket is still used in the same fashion as described in my previous article[1] with the exception that since there are only four fenestrae in the new bucket in place of the original five, the examiner must substitute a plain paper strip for one of the four mentioned if he wishes to test for bile.

286 West Eighty-Sixth Street.

1. Einhorn, Moses: Analytic Bucket for Quick Qualitative Analysis of Gastric Content and for Differentiating Bleeding Gastric and Duodenal Ulcers, J. A. M. A. **89**: 1333 (Oct. 15) 1927.

LOCALIZATION OF METALLIC FOREIGN BODIES BY ELECTRICAL MEANS

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Finding that the localization of metallic foreign bodies, particularly broken needles and pins, was a difficult procedure at times, I designed the electrical localizer here described and had it made by George P. Pilling & Son Company, Philadelphia. By its use a small incision may be made, causing less deformity and contraction than results in large exploratory incisions of the palm. Blood vessels and tendons are avoided and a minimum of trauma is performed.

When using small incisions and probing or using a small hook for localizing a foreign body, I have often felt what

Fig. 1.—Electrical localizer. Attention is called to window where light flashes when contact is made.

appeared to be the needle sought, only to find on bringing it to view that it was fibrous tissue, a tendon or a nerve. Accordingly, an instrument was developed that would register only when in contact with metal (fig. 1). In this instrument, known as an electrical foreign body localizer, a small electric

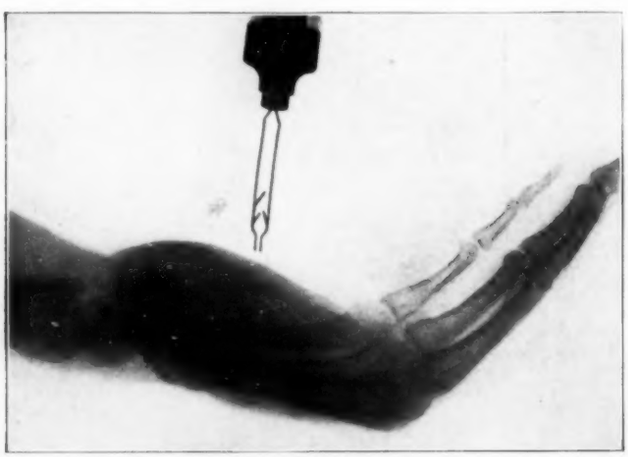

Fig. 2.—Localizer entering incision.

bulb lights in a window when the electrical circuit is made complete by metal coming in contact with the two localizing points inserted in the incision directly over the foreign body (figs. 2 and 3). The hooked ends are then slid under the needle, bringing it to the surface, or a closed hemostat is pushed down into the wound along the groove between the points, and the needle is seized and extracted (fig. 4).

In connection with the localization and removal of foreign bodies, the following points should be remembered:

1. In every case in which the presence of a metallic foreign body is suspected, splinting should be done when the patient is first seen, and before a roentgenographic examination is made. If this routine is adhered to, the foreign body will remain where demonstrated in the roentgenogram.

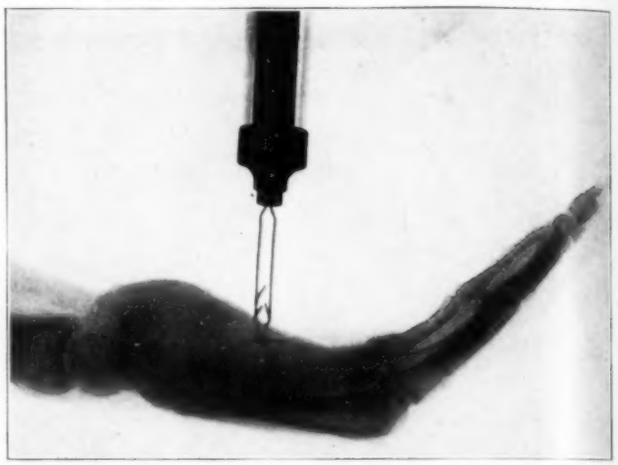

Fig. 3.—Localizer making contact with broken needle.

2. When the roentgen-ray examination is made, the head of a broken pin should be placed over the wound of entrance, and secured with a strip of adhesive plaster, as pointed out by Dr. S. W. Moorhead. The foreign body is then definitely located subcutaneously in reference to the wound of entrance. Plates should be made in two planes to show direction and depth.

3. Incision should be made at right angles to the long axis of the needle over its midportion, as advocated by Dr. E. L. Eliason. Failure to do this will often cause the knife to pass alongside and beyond the foreign body.

Fig. 4.—Appearance after removal of broken needle.

4. There is a tendency among operators to cut too high (distally) above the foreign body in its relation to the nearest identifying joint.

5. In cases of some duration, in which inflammation and tenderness are present, drainage with a rubber dam should be instituted and sutures should not be too tight.

REPORT OF CASES

CASE 1.—E. M., a boy, aged 7½ years, ran a needle into the dorsum of the foot three months before admission. The foot had been discharging pus ever since and was painful. Roentgen-ray examination showed the needle in the plantar aspect of the foot. Under local anesthesia with procaine hydrochloride an incision was made, the localizer inserted, the needle removed and a rubber dam placed in the wound, which was closed with two sutures. The patient was discharged on the fifteenth day.

CASE 2.—M. S., a woman, aged 33, who, two days before admission, broke a needle with her hand as the result of a fall, complained of pain in the hypothenar eminence.

Roentgen-ray examination showed a broken needle in the palm of the right hand. Under anesthesia with procaine hydrochloride, an incision was made, the localizer inserted and the needle removed by means of the hemostat. The incision was closed with two sutures, and the patient was discharged on the sixth day.

CASE 3.—E. J., a girl, aged 1 year, developed a boil on the right thigh one week before admission which the mother thought may have resulted from the child's having sat on a needle. Examination showed a hard indurated mass about 1 inch long transverse to the long axis of the thigh. The skin over the mass was movable and there was pain when the mass was turned. Without anesthesia, an incision was made, the localizer inserted and the needle removed with the hemostat. The wound was dressed and the patient directed to return for further dressings.

CASE 4.—J. M., a woman, aged 35, had broken a needle in the palm fifteen years before with resultant stiffness of the middle finger. A physician had used black salve to draw (?) it out. Flexion of the finger caused pain. Roentgen-ray examination showed an eroded needle in the middle of the palm. Under local anesthesia, an incision one-half inch long was made and the localizer inserted, without, however, revealing the needle. The incision was lengthened to 2 inches and an adherent cyst was exposed which, on removal, was found to contain the corroded and encysted needle. The wound was closed with sutures. Twelve days later swelling developed which was checked with magnesium sulphate dressings, and on the twenty-third day after the operation the patient was discharged with the wound healed.

CASE 5.—B. J., a woman, aged 27, ten days before admission ran a needle, which broke, into the lateral surface of the left palm near the carpometacarpal junction. Infection was present, and the roentgen-ray examination showed the needle in the lower part of the palm. Under gas anesthesia an incision was made, the localizer inserted, the needle removed with the hemostat, and the wound sutured. On the thirty-fifth day the patient was discharged with the wound healed. Recovery had been delayed by the infection which developed before the patient consulted a surgeon.

CASE 6.—H. G., a man, aged 28, had stepped on a needle two days before while getting out of bed in the dark. The wound caused by its entrance was visible, and there was pain on pressure over the plantar surface of the foot at the base of the great toe. Roentgen-ray examination showed the broken needle. Under anesthesia with procaine hydrochloride, an incision was made but the localizer did not reveal the needle. The incision was left open and the hemostat inserted by means of fluoroscopic visualization. The needle was buried in the tendon of the flexor longus hallucis; it was removed and the wound sutured. The patient was discharged fifteen days later.

CASE 7.—D. L., a woman, aged 32, broke a needle in the left palm the day before admission while washing clothes. She saved the remaining piece for examination. Roentgen-ray examination showed the needle in the lower part of the palm. Under gas anesthesia an incision was made, the localizer inserted, the needle removed and the wound sutured. The patient was discharged on the twelfth day.

COMMENT

In these recent cases the localizer proved successful in all but two cases, one in which the needle had been encysted for fifteen years, and the other in which it was buried in a tendon. Both cases were unusual. In the majority of cases, however, it should prove of value, particularly in cases seen in the office or dispensary, and to those who do not have ready access to a fluoroscope.

The instrument is easily sterilized in alcohol, and should be permitted to dry before being used. As it is small and self-contained it is readily handled and does not interfere with surgical technic as do electrically lighted instruments with long cords that are difficult to keep in an aseptic condition. Like other delicate electrical instruments, it should be tested before use and *handled* with the care it deserves.

1820 Pine Street.

Council on Pharmacy and Chemistry

REPORTS OF THE COUNCIL

ARGYROL OMITTED FROM N. N. R.

Argyrol is included in New and Nonofficial Remedies as a brand of mild silver protein, U. S. P. At the expiration of the period for which Argyrol stood accepted, the Council informed the A. C. Barnes Company that the advertising claims for therapeutic efficacy of this product went beyond those of mild antiseptic or protective value allowed for mild silver protein and asked that the firm present evidence to substantiate these claims; the firm was also informed that in order to permit the continued acceptance of the product the labels and advertising must bear the pharmacopeial title, mild silver protein, as a synonym. The firm presented no satisfactory evidence for the therapeutic claims in question and refused to mention the pharmacopeial name on the labels and advertising of Argyrol. The Council therefore voted to omit Argyrol from New and Nonofficial Remedies and authorized publication of the following report.

W. A. PUCKNER, Secretary.

Argyrol was the first representative of a certain type of silver preparations, consisting of colloidal solutions of silver or silver oxide in alkali-proteins. The silver of these colloidal preparations does not readily ionize, and they therefore lack the astringent and irritant actions of the ordinary silver salts; on the contrary, their viscosity gives them the soothing qualities of mucilaginous demulcents. On this account Argyrol achieved considerable popularity, and other manufacturers introduced analogous compounds, differing in the source of the protective protein but containing the silver in the same form, and having practically identical therapeutic properties. Following its usual practice in such cases, the Council grouped these together under the common designation of "Protargin Mild," in contrast to another quite different type of silver compounds "Protargin Strong," represented by "Protargol," which contain considerable ionized silver and which therefore produce quite different effects. The U. S. P. X followed the same practice, and describes the "Argyrol" type as "Mild Silver-Protein" (Argento-Proteinum Mite), the "Protargol" type as "Strong Silver-Protein" (Argento-Proteinum Forte).

Notwithstanding the clinical popularity of Argyrol, its antiseptic efficiency has been seriously questioned. Bacterial culture tests have given variable results, and in the clinical results it has been impossible to distinguish definitely whether improvement is due to the antiseptic or merely to the protective action. The Council, weighing the evidence impartially and to the best of its ability, has accepted the claim that Argyrol and the other Mild Silver-Proteins are useful in the treatment of inflamed mucous membranes, acting partly as mild antiseptics, but "largely as a mucilaginous demulcent and protective; and as a detergent, by dislodging pus." The Council requires that manufacturers should not go beyond these claims, unless they have submitted acceptable evidence for their extension. This restriction, which is certainly sufficiently generous, has been conscientiously observed by all the manufacturers, with the sole exception of the A. C. Barnes Company, the proprietors of Argyrol. It has been necessary repeatedly to call the attention of this firm to their printed statements which went beyond these claims, which were sometimes dangerously misleading, as when they claimed high germicidal efficiency, without qualification; and which were sometimes inherently impossible, as the claim of penetration into tissues. When these conflicts were called to the attention of the Barnes Company the firm did not submit facts but only arguments. These were mainly to the effect that the firm was justified in making the statements because these had also been made by various physicians. Nevertheless, having made the argument, the firm corrected the statements and the acceptance of Argyrol was continued. However, other exag-

gerations or misstatements emerged at the next review, and the same course had to be repeated. This has happened repeatedly.

The Barnes Company has also deliberately refused to comply with another rule governing the acceptance of articles to N. N. R. and continues to make claims for the composition of Argyrol and its radical difference from the other compounds of its class that the Council cannot accept as established by the evidence that has been submitted. These points may be discussed seriatim.

Misleading Statements as to Action.—The following quotations from a two-leaf circular and a blotter, submitted to the Council in the summer of 1926, in response to a request for advertising, are considered essentially misleading, directly or by implication. Some of these claims would be admissible if suitably qualified, explained or restricted; but in the advertising there are no such explanations and restrictions:

"Eradicates infections speedily."
"Powerful astringent and antiseptic action."
"Argyrol is an ideal germicide."
"In gonorrhoea, injections of 10 per cent Argyrol solution . . . shorten the course of the disease."
"Statistics show that 25 per cent Argyrol solution will prevent ophthalmia neonatorum."
"In diseases of rectum (fissure, fistula, etc.) Argyrol suppositories (20 per cent) are always palliative and frequently curative."
"Argyrol is used in the treatment of gastric ulcer and chronic gastric catarrh."
"To prevent infection, ophthalmic surgeons use 25 per cent Argyrol solution for several days previous to cataract operations, iridectomy, etc."
"Argyrol arrests virulently infective processes."
"Argyrol is the best remedy in gonorrhoea and inflammations of genito-urinary organs, eye, ear, throat and nose."

Before reporting to the Council on these claims, the referee endeavored to ascertain the reaction of the Barnes Company toward the more flagrant examples. The referee therefore addressed them as follows:

"The referee calls attention to the phrases used in two of the quotations: That it is a powerful astringent, and an ideal germicide. 'Ideal' would presumably mean an immediate 100 per cent success in all conditions, and of course, this is not attainable. 'Astringent' means a drawing together or puckering, at the site of application, which Argyrol does not produce. The referee assumes that you will desire to omit these claims, when your attention is called to them."

The following reply was received to these suggestions:

"'*Astringent.*' We copied that word in the connection used from the book 'An International System of Ophthalmic Practice,' edited by Dr. Walter L. Pyle. If you will furnish us with reliable clinical data that Argyrol is *not* astringent, we shall either include your statement in our circulars, or abandon permanently the statements of Dr. Pyle and many other surgeons who have observed that Argyrol does produce astringent effects. We publish only what reputable physicians have stated in high-grade medical literature. While this matter is subjudice, we shall refrain from stating that Argyrol is 'astringent.' 'Ideal' is perhaps a strong term, although such distinguished surgeons as Dr. Darier of Paris and Dr. Thomson of the Manhattan Eye Hospital (New York City) have each used the word 'Ideal' in connection with their published studies of Argyrol. We shall abandon the word in our future circulars."

These are typical instances of the "concessions" that have been mentioned. Dr. Pyle evidently did not use the term "astringent" in its ordinary sense. The bald statement that "Dr. Pyle and many other surgeons have observed that Argyrol does produce astringent effects" is not supported by evidence. The loose use of the word "ideal" proves nothing until the ideals are at least defined.

Efficiency of Argyrol in Ophthalmic Prophylaxis.—The referee also requested the published statistics in support of their statement that "statistics show that 25 per cent Argyrol solution will prevent ophthalmia neonatorum." To this the Barnes Company replied:

"On the attached sheet we give you a few of the hundreds of references to the efficiency of 25 per cent Argyrol solution in ophthalmia neonatorum."

This "sheet" gives six quotations; only two of these contain any numbers; one of these states somewhat loosely that in a hospital and dispensary service of 900 to 1,000 deliveries a year, between 1 and 3 per cent of the infants developed ophthalmia under Argyrol prophylaxis; the other reports less than 0.5 per cent of ophthalmias in 1,334 obstetric cases under Argyrol prophylaxis. Neither series can prove anything as to the efficiency of Argyrol unless the normal incidence of untreated cases in that series is known; or at least the incidence under some other form of treatment.

Having failed to obtain the statistics from the Barnes Company, the Council attempted to do so from the men quoted in the "sheet"; three of the six reside abroad and were not tried; one has died; one has not replied. There remains only one, and his comments are illuminating. His opinion, as quoted by the Barnes Company, reads:

"I use nothing but Argyrol as a preventive treatment of gonorrheal ophthalmia, acting on the advice of . . . [the professor of ophthalmology]. We use it continually in hospital and dispensary practice on account of the frequency of gonorrhea among that class of people. Since using Argyrol in a 25 per cent solution, I have diminished the proportion of ophthalmia cases in the hospital to between 1 to 3 per cent of the infants born out of a total service in the hospital and dispensary of 900 to 1,000 cases a year. Without looking up the records, which would take considerable time, I should say we had less than a third of the cases of ophthalmia with Argyrol than we used to have with nitrate of silver as a preventive treatment. Before applying Argyrol we used protargol in place of nitrate of silver, but I should say from clinical observations that the Argyrol was much superior to either. Another great advantage we find from using Argyrol is that we escape the irritative conjunctivitis which we often got from nitrate of silver instillation, although but a single drop of 2 per cent solution was used, and we immediately washed it out with salt water. Nevertheless, we had a large number of cases of irritative conjunctivitis, which for a day or two would look very much like actual ophthalmia."

Apparently this was written some time ago, and if the Barnes Company had taken the precaution to check the subsequent history of Argyrol in this service, they would have found much less enthusiasm. The reply to the Council's request for further information has quite a different tone:

"I am always guided by the Professor of Ophthalmology in my preventive treatment of ophthalmia. We used Argyrol for a time on his advice and I have no doubt what you quote from me was our opinion at that time, but we have recently received other advice from the Ophthalmological Department and have therefore returned to nitrate of silver solution, especially as I understand there is some law in Pennsylvania making this compulsory."

Having failed also in this attempt to obtain data for judging the efficiency of the Argyrol prophylaxis, the referee requested the secretary to have a search made through the available literature in English, for the last ten years, on ophthalmia neonatorum and the use of Argyrol in its prevention. This also failed to bring any comparative statistics; but they showed that the majority of the recent writers at least adhere to the Credé silver nitrate prophylaxis. The twelve writers[1] on the subject may be grouped as follows: Only one (Copeland) advises Argyrol as a routine; all the others use or advise the Credé silver nitrate method; six do not even mention Argyrol for the prophylaxis (Ball, Casey A. Wood, Duane, Gifford, Park, Ramsey); two mention Argyrol, but consider the nitrate more effective (N. O. Pearce, Waldeck); and three express themselves definitely against the use of Argyrol (Allport, Cheney, de Schweinitz: "not to be trusted"). Apparently ophthalmologists of experience have not been impressed by the "statistics" or other data, and would subscribe to the claim "25 per cent Argyrol solution will prevent ophthalmia neonatorum" only with the important qualification "sometimes—but not as often as silver nitrate." The omission of this qualification makes the claim misleading in effect. It must be added, in fairness, that many of these

1. These were:
Allport, F.: Fourteen Points Concerning Ophthalmia Neonatorum, Illinois M. J. **35**: 64 (Feb.) 1919.
Ball: Modern Ophthalmology, ed. 3, p. 267.
Cheney, R. C.: The Bactericidal Power of Argyrol, Am. J. Ophth. **6**: 648 (Aug.) 1923.
Copeland, G. G.: Blindness of the New-Born: A Preventable Disease, Canad. M. A. J. **8**: 724 (Aug.) 1918.
De Schweinitz: Diseases of the Eye, ed. 10, p. 219.
Duane: Text Book of Ophthalmology, ed. 7, p. 452.
Gifford, Harold: Treatment of Gonorrheal Ophthalmia, Southwest J. Med. & Surg. **24**: 1 (Jan.) 1916.
Park, L. F.: Infant Blindness (Ophthalmia Neonatorum), Pamphlet XI, Conservation of Vision, Series issued by Bureau of Health and Public Instruction, American Medical Association.
Pearce, N. O., in Abt's Pediatrics **2**: 413.
Ramsey, W. R., in Abt's Pediatrics **1**: 1142.
Waldeck, G. M.: Ophthalmia Neonatorum, J. Michigan M. Soc. **21**: 505 (Dec.) 1922.
Wood, C. A., in Abt's Pediatrics **8**: 365.

writers express themselves more favorably to Argyrol in the treatment of established ophthalmia.

When the foregoing report was submitted to the Barnes Company, they at last supplied some more definite figures; but these also failed to prove the prevention of ophthalmia neonatorum by Argyrol, for they were not sufficiently detailed to permit any estimate as to the natural variations of the incidence of ophthalmia in this service; and the paper contained intrinsic evidence that the series was probably not confined to specific ophthalmia neonatorum but included other forms of conjunctivitis.

The Pharmacopeial Synonym.—The rules of the Council provide that when a substance is admitted to the Pharmacopeia it will be retained in N. N. R. only if "the official name is given prominence on the labels and in the circulars and advertisements of such articles." When the silver compounds of Argyrol type were admitted to the U. S. P. X under the name of "Mild Silver-Protein," all the preparations of this type, which of course includes Argyrol, came under this rule, and the fact was brought to the attention of the manufacturers of these products in the fall of 1925. These have all carried out the provisions, with the exception of the Barnes Company. The attention of the latter was again called to this requirement in the fall of 1926. They replied as follows:

"We stand ready to prove, by definite, differentiative, chemical tests, the truth of our published statement that 'No other drug is, chemically, like Argyrol.' We believe that your term, 'Mild Silver Protein,' is both arbitrary and vague: it does not differentiate Argyrol from other silver products. We consider it superfluous baggage that would tend to the substitution of other products included in your blanket term. We, therefore, object to placing 'Mild Silver Protein' on our labels and circulars. When you brought this point up before, we made a canvass of many physicians and surgeons who direct large clinics in various cities and found a unanimous corroboration of our objection to drown the identity of Argyrol in a sea of products that differ chemically from Argyrol."

The Barnes Company is of course quite within its rights in disagreeing with the Council policies; but, on the other hand, the Council cannot alter its policies at the behest of interested parties, unless it is shown by facts or by disinterested arguments that the policies are not in harmony with the interests of the public. The argument that the Barnes Company found unanimous corroboration of their objection among physicians does not mean much unless these had both sides of the question fully and fairly presented to them; and the strong partisanship of the Barnes Company would not tend to make them good interpreters of the Council policies. It must be remembered, in the first place, that the case of Argyrol does not stand by itself, but that it must be considered in its relation to the many other cases in which endless and sometimes dangerous confusion has arisen by the policy of manufacturers to hide or to deny the identity of their products with the official articles. Prescriptions are still being written for Urotropine and Methenamine in the same mixture! In the case of the colloid silver compounds there is a very special need for the official title, to differentiate between the "mild" and "strong" compounds, which are used in quite different concentrations, and whose confusion would be uncomfortable at the least, and might have serious consequences. Granting that Argyrol is sufficiently well known not to need that protection, how about Silvol and Solargentum and Vargol? How can a line be drawn between the products that are safe from confusion and those that are not safe? Experience has shown that there is only one fair way of enforcing rules, and that is to enforce them impartially. If the rule requiring the pharmacopeial synonym is needed anywhere, it must be enforced everywhere, and that includes Argyrol.

The Chemical Individuality of Argyrol.—The Barnes Company does not deny that Argyrol comes under the U. S. P. definition of "Mild Silver-Protein." They contend, however, that this definition is not justified because it does not differentiate Argyrol from other silver products, or, more properly, from other brands of mild silver-protein; and they offer to prove by definite, differentiative chemical tests, that "No other drug is, chemically, like Argyrol." With complex mixtures like Argyrol such a demonstration may not mean very much; it would not be difficult to prove by chemical, physical and biologic tests that no pea is like any other pea. The real question is whether the differences are significant; and with the silver preparations, that depends on whether they involve the silver or the protein components of the mixture. The U. S. P. definition was framed with a view solely to the nature of the silver component, as reflected in its ionization, leaving the protein vehicle to the option of the manufacturers; this doubtless on the basis of the generally accepted view that the silver is the active component, and that the proteins serve mainly if not solely as the vehicle for conveying the silver. The essential question is, therefore, whether the chemical tests submitted by the Barnes Company demonstrate a difference in the nature of the silver-combination, or whether they are due merely to differences in the vehicle. To decide this question, the Chemical Laboratory of the American Medical Association was asked to check the tests submitted by the Barnes Company for the differentiation of Argyrol from two of the other Mild Silver-Proteins; namely, Silvol and Solargentum.

The Chemical Laboratory reports:

"The so-called specific tests for differentiating between Argyrol and Silvol and between Argyrol and Solargentum, submitted by A. C. Barnes Company, have been checked in the A. M. A. Chemical Laboratory. The tests in the main respond as described; but they do not appear to have bearing on the U. S. P. X tests for mild silver-protein, particularly the quality of the silver component as indicated by the yeast test. In some of the tests described, if the reaction materials stand for some time the results appear so nearly alike that the differentiation is practically impossible. In our opinion, therefore, the tests differentiate mainly the protein portion of the molecule; they do not indicate that Argyrol is essentially different from the other preparations in reference to the therapeutic component, i. e., the concentration of silver ions, as indicated by the yeast test."

On the other hand, the pharmacopeial yeast test shows that Argyrol agrees with the other mild silver-proteins in the proportion of its ionized silver. The agreement in this ionization is very striking: Pilcher and Sollmann[2] reported the following concentrations as necessary to arrest the fermentation by yeast, which is an index of its ionization (several figures after an article indicating differences in samples).

Argyrol 1: 145, 250.
Argyn 1: 180, 330, 500.
Cargentos 1: 167, 280.
Silvol 1: 80, 135, 165.
Solargentum 1: 180, 500, 670
Vargol 1: 500, 910

It is evident that the differences between different samples of the same brand are as great as or greater than the differences between different brands. There is a wide gap between the highest dilutions of these and the lowest of the strong silver-protein group; namely, 1: 3,300.

All this does not mean that Argyrol and the other products are in all respects identical, any more than a syrup and a tincture of opium are identical. On this account the Council has no desire to suppress the brand names but insists simply on the addition of the pharmacopeial name; partly because it does not see how it can fairly make exceptions to this rule, and partly because it believes it important that the mild silver-protein compounds should be identified by a group name to differentiate them from the strong silver-proteins. Provided this is done—but this is an important proviso—the manufacturer may properly emphasize the differences in the vehicle. Once it is clear that Argyrol is a Mild Silver-Protein, there can be no misunderstanding about the manufacturer's statement "No other drug is, chemically, like Argyrol"; but this statement is misleading unless the essential similarity in the condition of the silver is made plain.

It is evident that Argyrol cannot be continued in N. N. R. if the manufacturers continue to make unsubstantiated and misleading statements in regard to its therapeutic actions and chemical individuality and if they continue to disregard the pharmacopeial title. It is therefore necessary to recommend that the acceptance of Argyrol be discontinued, and that this report be published in explanation of that action.

2. Pilcher, J. D., and Sollmann, Torald: J. Lab. & Clin. Med. 8: 301 (Feb.) 1923.

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SATURDAY, MARCH 17, 1928

TRANSMISSION OF PROTEIN HYPERSENSITIVENESS FROM MOTHER TO OFFSPRING

Why an infant will develop a violent allergic reaction when coming in contact with some food substance for the first time has remained an unchallenged problem for many years. When Ratner, Jackson and Gruehl of New York University and Bellevue Hospital Medical College undertook to study this problem systematically, a valid explanation became available. These authors [1] first studied the rôle of placental permeability and corroborated the earlier statement of Kuttner and Ratner [2] that the animal species seem to be divided into two main groups, those that have a placenta through which heterologous substances can pass with ease, and those in which the placenta is more or less impermeable to the passage of such substances. To the former group belong human beings, guinea-pigs and rabbits, and to the latter belong the ruminants. Thus the authors established an essential premise; namely, that in the human being and the guinea-pig a placental permeability does exist.

In their next study they analyzed the function of colostrum in the transmission of immune and other substances, and found that only in the ruminants does colostrum play a dominant part in the transference of substances from a mother to her offspring. In their third study they analyzed the rôle of milk and found that the striking work of Paul Ehrlich in 1892, demonstrating the passage of immune substances through the breast milk of the mouse, was later shown by many other investigators to be true for the mouse but not for the guinea-pig, rabbit or human being. Ratner, Jackson and Gruehl gave further evidence that the milk did not transfer any hypersensitiveness from a mother to her offspring.

With this fundamental background established, namely, that there is a placental permeability in the guinea-pig and the human being, and that the colostrum and milk are negligible factors, the investigators in their fourth study approached the problem of transfer of protein hypersensitiveness from a mother to her offspring. Earlier work of Rosenau and Anderson was corroborated. Mother guinea-pigs were sensitized with horse serum before pregnancy, and it was shown that all offspring born of these mothers were sensitive at the time of birth. On first contact with horse serum, given intravenously, the offspring died in acute anaphylaxis or developed severe anaphylactic symptoms. This type of transfer of protein hypersensitiveness was found to be of a passive nature and lasted for only three months, exactly the length of time that passively transferred immunity would persist, as shown by Ehrlich. This sensitivity, being of a passive nature, could not be transferred to the second generation.

In the fifth study, the investigators took up their main problem: to demonstrate whether it was possible to sensitize a fetus in the uterus of a mother who at the time of parturition was herself not sensitive. First it was proved that normal newly born animals could be made sensitive to horse serum. The investigators then took mother guinea-pigs in the last days of pregnancy and injected horse serum into them. Litters born from one to three days after the mothers had been injected with the serum were divided into two groups, those which received an injection immediately after birth and those receiving their first injection when a month or more old. The first group were shown to be uniformly nonsensitive, but those animals which were permitted to live a month were shown to have established a definite state of hypersensitiveness. This state of hypersensitiveness could therefore have been the result only of contact with the horse serum while in the uterus, resulting in the development of a specific and active hypersensitiveness after birth. Since they had shown that the permeability of the placenta in the guinea-pig and the human being are alike, these authors offer this active sensitization in utero, obtained experimentally in the guinea-pig, as explaining the bizarre manifestations of infants reacting allergically when coming in contact with a food for the first time.

It is to be hoped that clinical evidence can be brought forth to substantiate these experiments. The natural outcome of these studies should lead to a broad preventive outlook by obstetricians particularly, in their attitude toward any excessiveness or cravings in the mother's diet during pregnancy, and toward the influence that injections in general might have on the future sensitization of the unborn child.

In an earlier investigation, Ratner, Jackson and Gruehl [3] presented evidence that the nasal passage may

1. Ratner, Bret; Jackson, H. C., and Gruehl, H. L.: Transmission of Protein Hypersensitiveness from Mother to Offspring: 1. Critique of Placental Permeability, J. Immunol. **14**: 249 (Nov.) 1927; 2. The Rôle of Colostrum, ibid., p. 267; 3. The Rôle of Milk, p. 275; 4. Passive Sensitization in Utero, p. 291; 5. Active Sensitization in Utero, p. 303.

2. Kuttner, Ann; and Ratner, Bret: The Importance of Colostrum to the New-Born Infant, Am. J. Dis. Child. **25**: 413 (June) 1923. Human Colostrum, editorial, J. A. M. A. **81**: 662 (Aug. 25) 1923.

3. Ratner, Bret; Jackson, H. C., and Gruehl, H. L.: Respiratory Anaphylaxis, Am. J. Dis. Child. **34**: 23 (July) 1927. Respiratory Anaphylaxis, editorial, J. A. M. A. **89**: 885 (Sept. 10) 1927.

act as a portal of entry for dry substances, producing the basis for future allergic manifestations. Now these investigators suggest another portal of entry through which sensitization may be brought about in the human race. Obviously, much remains to be learned as to the manifold manners in which protein sensitization may become established. Knowing some of the various mechanisms which may be at work, physicians may take active measures to prevent the occurrence of some types of protein hypersensitiveness.

PRACTICAL ASPECTS OF LOW RESIDUE DIETS

Dietetics is singularly subject to all sorts of fads and foibles. Many of them have some basis in experience but fail because they represent generalizations assumed to be universally applicable, whereas they are supported only by reference to circumscribed conditions. Others are merely the expression of enthusiastic expectations fostered by clever propaganda. Perhaps the greatest dietetic errors rest on the implicit assumption of many untutored persons that all alimentary tracts are essentially alike. Accordingly, if the dictum that "constipation is a national ill" meets with popular acclaim there is real danger that hundreds of delicate intestinal canals deserving the mildest of treatment will be insulted by a bombardment of roughage or laxative pills.

In the promotion of intestinal potency the occasional need of the bland diet is in danger of being overlooked. Hosoi, Alvarez and Mann [1] of the Mayo Clinic have recently remarked that there are many occasions when physicians or surgeons wish to use a diet with the least possible residue, particularly in the treatment of patients with diarrhea and following operations about the rectum or anus. If the fecal residues can be made small enough and if defecation can be postponed for a week or more, not only will the patient be spared much distress but healing wounds can be kept clean. Experimental observations in the Mayo Foundation have thrown further light on the rate of passage of many foods into the large intestine in which the mucous membrane of the colon absorbs little besides water. They also indicate the character of the unabsorbed residues that may be expected from the use of various common foods. Among those with the least residue are gelatin, sucrose, dextrose, concentrated broth, hard boiled egg, meat, liver, rice, farina and cottage cheese; among those with the largest residues are fruits, potatoes, bread, lard, butter, Swiss cheese, soft boiled egg, raw egg albumin, milk and lactose.

The relative indigestibility of raw egg white which Bateman [2] demonstrated long ago in the Yale laboratory of physiologic chemistry has been verified in contrast to the widespread belief that there is nothing more nourishing than a raw egg. The Rochester investigators found considerable evidence both in their experiments and in earlier observations that milk should not be given when it is desired to prevent bowel movements. The large residue often left in the terminal ileum after the taking of milk may account for the fact that it is not well tolerated by many persons and that it makes them "bilious." This is a point that Hosoi, Alvarez and Mann think should be brought to the attention of physicians because there is a tendency on the part of many to prescribe milk and sometimes nothing but milk whenever they wish to give the digestive tract a rest. They are prone to prescribe it also in cases of diarrhea, although it appears that it is one of the first foods they should interdict. It has been the Rochester experience that milk has a bad effect on many persons with diarrhea who promptly get well when given nothing but meat or meat with a little pure starch and sugar. As a practical advice it follows, in the words of Hosoi, Alvarez and Mann that the best basis for a low residue diet is lean meat. To this might be added rice, hard boiled eggs, sugars (except lactose) and probably small amounts of fruit juices, tea and coffee. The highest degrees of absorption could probably be secured by giving small amounts of food several times during the day. Their experience with dogs, together with that of Beuttenmüller with a patient having a fistula in the terminal ileum, suggests that less material will be carried into the colon if the diet is kept fairly dry. These dietotherapeutic suggestions also must not be applied without due regard to the specific needs and alimentary peculiarities of the person under treatment.

1. Hosoi, K.; Alvarez, W. C., and Mann, F. C.: Intestinal Absorption: A Search for a Low Residue Diet, Arch. Int. Med. **41**: 112 (Jan.) 1928.
2. Bateman, W. G.: The Digestibility and Utilization of Egg Proteins, J. Biol. Chem. **26**: 263 (Aug.) 1916.

A VICIOUS MEDICAL PRACTICE BILL

Osteopathic surgeon generals of the army, navy and public health service are a possibility if a bill (S. 3592) introduced in Congress by Senator Copeland, March 10, becomes a law. The bill provides that "the degrees doctor of medicine and doctor of osteopathy shall be accorded the same rights and privileges under governmental regulations." There is no indication that this mandate is to be limited in its operation to the government of the District of Columbia, although the rest of the bill is so limited. If the bill is enacted, it may be, and no doubt will be, construed to put osteopaths on the same basis as doctors of medicine throughout the entire federal government service.

Both Senator Copeland's present bill and the earlier bill introduced by him at the instance of the Medical Society of the District of Columbia (S. 3107) are fundamentally unsound. They undertake to authorize and regulate matters that they do not accurately define. Both bills recognize the practice of osteopathy as something distinct from the practice of medicine and from

the practice of drugless healing, but neither gives indication as to what the distinctions are. If the proponents of this legislation do not know the distinctions or fail to state them, how are law enforcement officers and the courts to find out what Congress intends by such legislation?

The recent Copeland bill undertakes not only to regulate the practice of a cult which is undefined even by its own devotees but also to authorize and regulate the practice of an innumerable category of other cults, so-called drugless healers, who under this bill obviously need not be drugless at all. "Drugless healing," according to the bill, is "any system of healing that teaches that disease *may* be prevented, relieved, or cured without the use of drugs, medicine, or operative surgery." Any five or more adherents of any so-called drugless method of healing may, as a matter of right, demand that an official, permanent board of examiners be appointed, if this bill becomes a law, to represent and give dignity to each and every system of "drugless healing" they elect to cover by a petition. The only limitation on the official recognition of any such system is that the petitioners must differentiate it from the unrestricted practice of the healing art; it may include surgery and the use of any and all drugs, if its proponents can find any one element of unrestricted practice that they are willing to forego.

All of the elaborate provisions of Senator Copeland's bill for the protection of the public against fraud and ignorance in the treatment of disease are thrown to the four winds when it comes to the diagnosis of disease and its treatment by prayer or spiritual means, or by hygienic, dietetic or domestic remedies. Any person is at liberty to engage in the business of treating disease by any or all of these agencies. He need not submit evidence to any one as to age or moral character. He need not have affiliation with any organized religious body. He is not called on for evidence of professional or spiritual ability. He is not asked to tell how, in order to adapt his curative treatment to the needs of his patients, he diagnoses the diseases from which they suffer. He asks leave or license from no one, he registers nowhere; he simply opens an office or hires a hall, advertises his business by signs or otherwise, and proceeds to collect from the gullible public whatever he can for his services.

Limitations of space prevent a discussion of other glaring defects in the pending legislation, such as those relating to the licensing of osteopaths to use drugs and to practice surgery, to the issue of licenses by reciprocity, and to the refusal, suspension and revocation of licenses. What has been said, however, is probably sufficient to show the undesirability of the enactment of any such legislation. The District of Columbia is the seat of the national capital, but its people have no voice in Congress to influence legislation there. Its legislators are elected by the people of the United States outside of the District of Columbia, and are responsible and responsive to those who elect them. All of this has been forcibly pointed out by the Medical Society of the District of Columbia in its recent appeals to the state associations for the support of its legislative program. All of it applies with equal force now, when the medical profession of the entire country should unite in an appeal to Congress to dissuade it from the enactment of any of the bills that are now pending to regulate the practice of the healing art, of osteopathy, of chiropractic or of naturopathy in the District of Columbia.

The problem of the District of Columbia is the problem of the entire United States. Legislation by Congress is inevitably reflected in legislation in the individual states. Physicians are protecting their own people when they urge their representatives in Congress to defeat such vicious legislation.

Current Comment

JOHN HUNTER—MAN OF SCIENCE AND SURGEON

The present year marks the two hundredth anniversary of the birth of one of the greatest surgeons of all time, John Hunter. The name of this truth seeker has been associated with that of Paré and Lister in the field of surgical progress. Hunter was distinguished as a human anatomist, comparative anatomist and physiologist, in addition to being the founder of scientific surgery in England. At the Lister Centenary last year the president of the Royal College of Surgeons, Sir Berkeley Moynihan, bracketed the names of Hunter and Lister, saying that they stood apart from all other men by reason of the innumerable gifts which they had conferred on mankind. Garrison has remarked in his History of Medicine that Hunter's permanent position in science is based on the fact that he was the founder of experimental and surgical pathology and a pioneer in comparative physiology and experimental morphology. Consequently Hunter may properly be regarded as "one of the great all-around biologists like Haller and Johannes Müller." Sir James Paget[1] wrote that Hunter's mind was set on science, while his business was practical surgery. Thus, as Paget further reminds us, Hunter's mind, given to science, was engaged in practice; he associated surgery with science and made them mutually illustrative. Before his time, surgeons had been "empirical"; this word had been used not in its real sense of "experimental," but as meaning something discreditable, something not founded on "principles." Yet these "principles" were only thoughts exercised on insufficient facts, gradually but slowly becoming more nearly sure, but hardly applicable from one century to the next. The man's influence on modern thought and practice is reflected in the charac-

1. Introduction to Paget, Stephen: John Hunter, New York, Longmans Green & Co., 1898.

ter of his pupils. Among the more famous were Astley Cooper, Abernethy, Physick, Thomson, Cline—who had the spirit of Hunter. One of the first of these pupils was Edward Jenner, who became a resident pupil as early as 1770, when he was but 21, and lived two years in Hunter's house. Less generally known is the fact that Hunter was the first to study the teeth in a scientific manner, and first to recommend complete removal of the pulp in filling them. Orthodontic procedure in malocclusion was not unknown to him. The Hunterian Museum with the thousands of specimens that he collected marks another side of his multifarious activities. Thus one can better appreciate Stephen Paget's estimate of John Hunter. The whole output of his working life, he wrote, is fourfold—literary, surgical, anatomic, physiologic and experimental; but the multiplication together of these factors does not give the whole result of his work. He brought surgery into closer touch with science. Contrast him with Ambroise Paré, a surgeon in some ways like him, shrewd, observant, ahead of his age; the achievements of Paré, side by side with those of Hunter, are like child's play in comparison with the serious affairs of men; Paré advanced the art of surgery but Hunter taught the science of it.

PROPRIETARY PREPARATIONS AND PROPRIETARY NAMES

The rule of the Council on Pharmacy and Chemistry of the American Medical Association provides that, when a proprietary substance is admitted to the U. S. Pharmacopeia, it will be retained in New and Nonofficial Remedies only if the official name is given prominence on the labels and in the circulars and advertisements of such articles. The justice of this rule of the Council concerning the recognition of proprietary names cannot be questioned. In consideration of the benefits that may come from a discovery of a therapeutic agent, the Council concedes to the person or firm which, by right of the discovery, controls such a product the right to name it. The name selected must not be therapeutically suggestive or otherwise subversive of scientific pharmacy. If any product which, by reason of the absence or lapse of patent rights or for other reasons, is open to manufacture by more than one firm, the Council reserves the right to select a common name and to insist on this name, permitting the firm, however, to append its identifying mark. These actions are in the interest of scientific medicine and of medical progress. For instance, few physicians realize perhaps the resemblances that exist between argyn, argyrol, cargentos, silvol, solargentum and vargol. Obviously, it is important for the general practitioner to know that these things are essentially the same, that they accomplish essentially the same things, that they are used for essentially the same purposes. In Useful Drugs, published under the auspices of the Council, all of these preparations are included under the heading Argento-Proteinum Mite, or mild silver-protein. They differ slightly in composition, but are essentially equivalent therapeutically. Elsewhere in this issue (page 849) appears an extended report by the Council on Pharmacy and Chemistry of its action in omitting argyrol from listing in New and Nonofficial Remedies. The history of this remedy is another example of the manner in which clinical evidence, none too carefully obtained, may boost a new remedy into popularity beyond its due. The cultist leader who has once accumulated a vast number of followers, even though exposed and himself convinced of his folly, does not recede from his views. The promoter of a proprietary preparation, riding on the crest of a wave of popularity, is seldom willing to come down to the level of the quiet sea when the storm subsides. The Council has examined calmly and dispassionately the therapeutic claims made for argyrol and has been unable to find evidence for some claims which it terms essentially misleading. Furthermore, the manufacturer is apparently unwilling to adopt the Pharmacopeia synonym for it. The insistence on this synonym is important that physicians may fully comprehend the nature of the substance that they are using. The first duty of any one working in the field of medicine, be it investigator, teacher, physician or manufacturer, is to the public that is being served. This policy has been fundamental in compelling the present action of the Council on Pharmacy and Chemistry in relation to argyrol.

Association News

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Twenty-Fourth Annual Meeting, held in Chicago, Feb. 6, 7 and 8, 1928

(Continued from page 776)

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

FEBRUARY 7—MORNING

Survey of the Grading Committee

MRS. M. A. BURGESS, New York: We have been engaged during the past year in trying to find out what the true facts are about the supply and demand of nursing service. We have reports in the office now from a little more than 35,000 nurses and more than 28,000 physicians. We have some detailed reports from more than 1,500 hospitals. We have not been so fortunate in getting returns from patients, but we have well over 2,000 already, and more patient, nurse and medical reports are coming in every day. Then, in addition, of course, we have a great many smaller groups of reports from nursing registries, for example, or from public health organizations.

There seem to be four things which I think the Grading Committee a few months from now will be in position to state publicly. The first is that the nursing profession needs help in cleaning house, and that means not only getting rid of some of the frankly undesirable nurses (there might be nurse practice acts, for example), but also in utilizing the ones who just now are not very valuable, giving them work they really can do, and helping them to be thoroughly worthwhile members of the profession. There is a great body of worth-while women who could be valuable if they had just a little helpful leadership. I think that problem is one which the nursing profession must face frankly. The first problem is to clean house; the second is to put up the bars so that undesirable material cannot enter; the third is to keep track of what their own workers are doing, and help them so that each nurse can be doing the worth-while things which she

might do if she had leadership; the fourth is to provide a far more flexible type of service than has ever yet been provided.

I should be sorry if you went away with the feeling that I am inclined to think that many nurses are bad ones. I did not know the nursing profession before I entered it. It was a brand-new group to me. I am much impressed with the quality and character of the women who form the backbone of the profession. I like them immensely personally, I have a great admiration for them, and I am perfectly confident that if they are given a reasonable amount of help and understanding they will be able to do the things which so thoroughly need doing in their own profession. They are very able, they are beginning to see the difficulties; many of them have seen them for a long while, and I think that the changes, especially the giving of a flexible nursing service, will come in the near future if they can get help.

I should like to close this talk with the suggestion that if the doctor will take ten minutes he may make a real contribution toward solving an extremely difficult problem.

February 7—Afternoon

The Educational Value of Autopsies

Dr. Harvey H. Bemis, Detroit: Karsner states that an autopsy is a postmortem examination of the body to determine the pathologic processes present in their relationship to the clinical phenomena and history, their interest for the surviving relatives, their importance to the community as a whole, and their value in the study of the cause, processes and nature of the disease.

Postmortem examinations are widely recognized as a means of advancing our knowledge of medicine and are necessary adjuncts to the completeness of the case study. It is here that we are afforded our opportunities of studying the earliest manifestations of disease, particularly in persons presumably healthy but killed by accident. There is also the normal appearance of various organs and tissues necessary to a recognition of mortal processes or slight variations from health. Anomalies may be found in study, anatomy reviewed, results of operative procedure noted, and even surgical dexterity can be acquired by performing surgical operations in selected cases where no visible disfigurement of the body is entailed. The medical student profits by the chastening influence of the autopsy room, witnessing, as is inevitable, the mistakes of his elders, with an occasional diagnostic triumph. He obtains an objective, first-hand knowledge of the morbid processes caused by disease. Without this, a rational conception of the nature and course of disease cannot be acquired. He is able to recognize the etiologic range of variation in different organs and tissues and acquires an anatomic picture which he correlates with his physical observations. Medical research, of necessity, depends on the autopsy for its disclosures and stimulative effect. Conditions observed at postmortem examinations suggesting definite problems or methods of attack are continually opening the doors into fascinating realms of medical romance, and when entered discoveries may result in inestimable value to humanity. It is important, and should be of interest to the family to know the cause of death.

The community profits by the increased efficiency afforded its medical men at autopsy. The necropsy records furnish the only means of correcting the now unreliable vital statistics. The hospital and particularly the teaching institutions where the autopsy is a matter of routine rather than a rarity show an increased efficiency and improved morale. The more modern clinical-pathologic conference is a valuable substitute. The procedure that we have adopted at the Detroit Receiving Hospital, which is the main teaching unit of the Detroit College of Medicine and Surgery, differs little from the pathologic conferences held elsewhere. Mimeographed copies of an abstract of the case history, physical examination and laboratory observations are distributed. Copies of these are mailed to the main discussers a few days previous to the conference. After the clinicians have presented their impressions and before the pathologist reviews the case, the pathologic specimens are passed round as unknown. Then follows the pathologic report, the discussion by the pathologist, and a screen demonstration of the microscopic picture of the important lesions. These conferences are attended by the various members of both the school and hospital staffs as well as by the medical students.

The Autopsy from the Standpoint of the Medical Staff and the Hospital Administration

Dr. Christopher G. Parnall, Rochester, N. Y.: The percentage of autopsies is an index both of the character of the work of the medical staff and, as has been pointed out by Dr. Christian, an indication of the desirability of a hospital for intern training. The generally low percentage of autopsies in American hospitals indicates that they are not realizing their best possibilities as medical institutions. If the autopsy is important as an indicator of the character of the medical work, the inference is that more emphasis should be placed on medical administration. The ideal administrator is a medical director who retains the point of view of the medical practitioner. A low percentage of autopsies is a reflection on both the administration and the medical staff. Medical students should be better instructed in the nature of hospital functions and organization. Medical staffs should assume more interest in determining hospital policies. Medical service in a hospital is the very object of its existence and is the chief concern of the administration. In a modern hospital the administration is expected to require high standards of medical service and the staff has a right to expect active cooperation from the administration in maintaining an atmosphere of scientific interest and a tradition of good professional service.

The employment of competent and experienced chief resident physicians should be more general in this country. The chief resident physician should be an administrative supervisor of all the medical work in the hospital, including the responsibility for the obtaining of autopsies. An experienced pathologist is necessary if full use is to be made of the autopsy when obtained. Proper facilities, including a suitable postmortem room, must be maintained. There must be an organized method, free from friction, for obtaining permission for autopsies and expediting their performance. In all hospitals the ideal should be an autopsy in the case of every institutional death whether occurring in ward or in private service. Medical house officers are to be encouraged to obtain permission for postmortems and their efforts recognized. There should be a stigma attached to the report of a death without an autopsy. The autopsy furnishes material for scientific investigation into the cause, diagnosis and treatment of disease. While it discloses mistakes, it also justifies diagnostic conclusions and therapeutic measures. The physician of high standing has nothing to conceal. The general use of autopsies contributes to the scientific atmosphere of the hospital; it inspires humility and encourages honesty. The fullest use should be made of the autopsy for the benefit of the physician, the hospital, the family and the community.

The hospital might well provide for the performance of autopsies in cases of death in the practice of staff physicians outside the hospital as a convenience and encouragement to the staff and as a means of helping in educating the public to the value of the autopsy. When the public understands its value, there will be no opposition to the postmortem examination. The laws relating to postmortem examinations should be liberalized. Permission for autopsy should not be a legal requirement. A death certificate should not be issued until the cause of death is established or corroborated by autopsy.

Circumstances that Influence the Obtaining of Necropsies

Dr. Elexius T. Bell, Minneapolis: This paper will be published in The Journal.

The Minimum Procedure That May Justly Be Referred to as an Autopsy

Frederick C. Smith, Marion, Ohio: There is no problem relating to medical educational standards of greater importance than that of determining what minimum procedure should be regarded as an autopsy. The Council, having adopted a standard as to the number or percentage of autopsies required of hospitals training interns, seeks now to

determine a standard as to their quality. A solution to this question supposes a thorough understanding of the autopsy. We must know what it has done for medical science in the past, what it can do in the present to make us better physicians, and what it is likely to do for future medicine. It comprehends a knowledge of the antemortem phenomena of disease and of the pathologic changes that may be found post mortem. Neither the clinical manifestations of disease nor the anatomic changes found after death can be understood without the autopsy. And the false conception which prevails generally among physicians that the problems of medicine can be understood by studying the results of past autopsies contributes largely to inferior medical knowledge.

Both the positive and the negative value of the autopsy as an educational factor in the present must be understood. Percentage and quality of autopsies determine the standards of medical education. Of the two, quality is the more important. Therefore, the standard of standards of medical education is the minimum procedure that may justly be referred to as an autopsy. Essential to a properly conducted autopsy is a complete clinical record of the case. Much of the value of an examination may be lost without this. Both major cavities must be opened and all viscera and parts macroscopically examined as a routine. Supplemental examinations must be made of parts found diseased. A microscopic examination must be made of all parts found diseased macroscopically, or which showed clinical evidence of disease. Whenever clinical evidence showed central nervous system involvement the brain and spinal cord must be examined. Likewise with the sinuses. In surgical deaths special attention must be given to emboli, thrombosis and phlebitis and bleeding. In malignant conditions the primary seat must be determined and metastases traced. When clinical evidence of thyroid disease or of disease conditions of bone exists, the respective parts demand examination. Bacteriologic and serologic examinations are to be made whenever they will yield information. The minimum procedure is concluded when all anatomic changes found post mortem are coordinated with the clinical data.

DISCUSSION ON PAPERS OF DRS. BEMIS, PARNALL, BELL AND SMITH

DR. HOWARD T. KARSNER, Washington, D. C.: It is a duty to push ahead the applied science idea, and this is a program for all medicine rather than for the pathologists only. The program can be productive only if there is a healthy and hearty spirit of cooperation and mutual confidence. The clinician with ex cathedra doctrines and the pathologist with the superiority complex have no place in the scheme unless they reform. The thoughtful devotee of medicine needs no lecture on the educational value of the autopsy. It is essential that the laity be informed, and, indeed, subjected to sane well directed propaganda. We, who have the evidence, must present it repeatedly and convincingly. Our own conviction must be supported by our actions. Unless we ourselves are willing to be the subjects of what we ask of others, we stand indicted of insincerity, and we cannot win any advance whether the true bill leads to acquittal or not. The fact that the autopsy is a scientific inquiry is paramount. Any procedure which has not this feature is not to be regarded as an autopsy. Fundamentally, any restriction of exploration which excludes this feature also excludes its designation as an autopsy. The law, however, may regard any postmortem exploration as an autopsy and we cannot defend a lawsuit by resort to academic technicality. Candor compels me to say that the least that can reasonably be regarded as an autopsy is a complete examination of the thorax and the abdomen. To the trained pathologist, that is common sense. If statistics must be compiled, and certainly they have a genuine value, anything less than the procedure just mentioned should be tabulated and indexed as a partial autopsy. Certain European countries assume that an autopsy will be performed unless specifically forbidden by the relatives, whereas our states assume that an autopsy will not be performed unless specifically sanctioned by the relatives. Until we can alter this conception in our states, we shall face difficulties. Therefore our principal activity must be directed, through education and if need be propaganda, toward the objective of completely inverting an established point of view. There is no question of the propriety of this objective, but in order ultimately to attain it we must have solidarity among ourselves. The greatest possible number of all the physicians in the country must realize with sympathy and concord that the effect is right. Naturally, time will be consumed in the project. In the first place, our criticism of the statutes is general rather than specific because we have not available a compilation of the laws of the various states concerning the matter. Fruitful attention has been given the topic of medicolegal autopsies by a committee of the division of medical sciences of the National Research Council, which has made an enlightening survey; but the civil autopsy has not been covered in a comprehensive manner. In order for us to have a definite point of departure, we must have an examination of the statutes and court decisions in the various states. With this information it should be possible to make recommendations for change.

DR. H. E. ROBERTSON, Rochester, Minn.: The clinician is the keynote, and he is the man who is responsible not only for our getting the postmortems that we do get, but for our not getting the postmortems that we do not get. In the past, a good many clinicians wanted to bury their mistakes. They are a disappearing factor. Furthermore, the clinician has been slaughtered many times by the pathologist in order to make a Roman holiday for students and for his confrères. I must say he has taken it in mighty good part. I do not understand why some of us pathologists were not shot long ago. This sort of attitude of the pathologist has been changed somewhat. Many of them have acquired a little good sense. The doctor himself does not want a postmortem done on his relatives, nor does the nurse or the undertaker because they remember what an awful exhibition many autopsies have proved to be. In the past, we have not always conducted our postmortems as we would like to have them conducted on our own relatives. The decorum of the postmortem room has not always been one of respect or thoughtfulness. Here is a real reform that can be made, and this reform must begin with the pathologist. Let him insist on and obtain the proper spirit of reverence in the postmortem room.

DR. A. C. ABBOTT, Philadelphia: While I was a student in the medical school a patient with a distended abdomen was brought into the clinic and presented as a case of ascites incident on cirrhosis of the liver. Our teacher gave us an admirable and exhaustive clinic on those conditions and at the end of the hour most of us thought we knew about all that was worth knowing of that pathologic condition of the liver and its consequences. On the afternoon following the clinic, word reached us that the patient who had been exhibited in the morning had died. A classmate and myself decided we should like to see just what a cirrhotic liver looked like, so we called on the family and received permission to examine the body postmortem. There was no evidence of a cirrhotic condition of the liver, but instead there was widespread peritoneal miliary tuberculosis. I do not cite this experience in criticism of our teacher, for he was an able clinician and a man of great erudition, but rather to emphasize the incalculable importance of seeing things objectively, as they are, devoid of all speculative considerations.

DR. A. S. BEGG, Boston: It is an embarrassing thing for an anatomist to try to use material that the pathologist is through with, but we try to cooperate. We have an arrangement in my section of the country whereby we report back to certain institutions which supply us with material just what we find in the dissecting room. We also have an arrangement so that we can call on the pathologist to demonstrate interesting material as we find it in the dissecting room. For example, last year we had three stages in the development of aneurysm of the aorta on three subjects in the dissecting room. We believe that in our anatomy department we can do a little in the teaching of pathology even in the beginning of the medical student's course.

DR. B. M. RANDOLPH, Washington, D. C.: I am a teacher of clinical medicine and have been greatly interested in trying to impress the importance of the autopsy on clinicians with

whom we come in contact. I quite agree that the major difficulty in procuring autopsies is a lack of cooperation from the attending physician. We get autopsies on largely over 50 per cent, some months 100 per cent of the patients who die in our wards under our own staff. The private patients who come to the hospital are the ones who pull our average down. That is owing to the fact that there is a large number of physicians who have the privilege of attending private patients in the hospital who do not take any particular interest in autopsies. We have a continually increasing percentage of private patients on whom we are getting autopsies, and have a gradually increasing group of medical men who bring patients to the hospital who are taking more trouble to help us to get autopsies on the patients who die in the hospital. There is one factor in the future of this matter, namely, the way students are taught at the bedside of the patient; that is abandoning, to a great extent, accepted nomenclature and trying to impress on them a visualization in the cases they study of the pathologic condition present, to get them to think of the lesions, not labeling them with names merely, but thinking of them in terms of the pathologic observations and in the parallel study of pathologic specimens which are obtained from the museum. I think that is one factor in the education of the future physician that will give him a more scientific outlook.

Dr. A. A. Hayden, Chicago: I am an otolaryngologist. Ear men recently have become interested in postmortems, owing to the fact that the American Otological Society has been given a considerable sum of money for the study of otosclerosis. Among the first and principal things that this committee has in mind is to secure a number of ears that have had the hearing tests carefully made and the personal histories of the patients carefully compiled, so that the pathologic observations will be carefully correlated with the life and the family history of the individual. I was present recently at a meeting of the Chicago chapter of the American League for the Hard of Hearing, attended by 200 or 300 persons, all more or less deaf, some of them very hard of hearing. I was afraid, I admit, to get up and ask these people to will this committee their ears, but in talking, after the meeting, with a number of these unfortunate persons, most of whom were able to read my lips without difficulty, I was surprised to find the favorable reception that the proposition that I was afraid to make to them publicly received privately.

As one who has charge of interns in a fairly large hospital in this city, I want to say amen to everything that Dr. Robertson said about the decorum or perhaps the lack of decorum in the autopsy room. All too frequently this room is located in the basement or next to a boiler or in some uncomfortable and undignified place.

I think that perhaps I have even a better right to speak to you than some of the men who have addressed you, because in my own will it is written that my remains are to be subjected to a postmortem examination.

I remember when my mother's body was opened, and my wife and I were present. I was interested, of course, in the results. My wife was quite shocked at some of the things Dr. Robertson has mentioned, and instead of making a convert to postmortem examinations out of her I feel that the opposite effect was obtained. I believe that in many states at least, even though it is expressly stated in a person's will that it is his desire that a postmortem examination be made, in the last analysis of things that is not mandatory on his people, on his family or on his executors.

Something that has not been touched on which I think often stands against the obtaining of postmortems is the attitude of the coroner's physician. The men in Chicago, of course, are called on to do a large number of postmortem examinations, and they get tired doing them. Their tendency, then, is to pass the matter over lightly. This is particularly true, it seems to me, the closer politics is related to the coroner's office. There is a distinct relationship between the political coroner or the coroner who obtains his appointment as a coroner's physician through politics and the low percentage of autopsies that will be done by that man.

The situation that Dr. Bell has spoken of in Minneapolis is ideal, I should think. We find that one of the great troubles with undertakers is that they say it is harder to embalm a body after it has been opened; but there is another formidable objection on their part, and it is an entirely economic one. The undertaker likes to be notified, of course, as soon as the death occurs, and if he will tell you the truth, he is not really sure of the funeral until he gets the remains in his own possession, in his own office. One group of relatives may want another undertaker, and for that reason the delay that is incident on the performance of a postmortem is one of the things that they seriously object to.

I was interested in Dr. Bell's statement about the relatively few autopsies after 30 years of age; also the relatively high number of men that come to autopsy. In a considerable number of years at our hospital I do not remember a single case of embarrassment from anything that has come out of the autopsy room.

I think that a great deal can be done first along the line of educating the public, as Dr. Bell has said, but I think that perhaps the word "fashionable" is better than the word "education." I believe that if prominent citizens had autopsies on their bodies it would become popular. For instance, if an autopsy had been held over the remains of the late President of the United States, a citizen of Dr. Smith's city, the whole situation through the country would have been immensely easier. I think that the hospital executives, that nurses, that physicians, can do a great service to this cause in more often arranging, as far as they can, for the postmortem examination of their own bodies.

Dr. I. D. Metzger, Pittsburgh: I come before you as an administrative officer over hospitals. As such, I want to express my appreciation to the Council for the request, demand in fact, which it makes that 10 per cent at least of patients who die at the hospital shall come to autopsy. Our board in Pennsylvania has unanimously approved it. The laity is not interested very much in any procedure which helps to educate the physician after he once has been licensed to practice medicine. That is shown by the reaction against vivisection and by the fact that patients do not want to be charged for pathologic work done after an operation. The doctor is handicapped when he goes to the friends of the patient who dies and says, "I want to know a little more about this case. It was an obscure one. I should like to know more specifically relative to the disease." They will say, "Why didn't you speak of that before hand so that we might procure some one else who did know? Why did you not call in consultants who might have known?" The doctor himself is loath to speak about the matter.

We have had several key men mentioned this afternoon. For the key man in the professional activities of the hospital I like to take the pathologist. Every hospital ought to have a full-time pathologist who is compensated in such a way as to make possible giving his full time. Then the clinician who is in charge of the case may step aside and he who is recognized as being interested more especially in the professional side of the case will carry the case to the autopsy table and secure the results from it.

Dr. J. P. Simonds, Chicago: The facilities of many hospitals are not adequate for satisfactory postmortem examinations, and it is sometimes almost impossible to perform one in as neat a fashion as is expected in a surgical operation; but of course much can be done to improve that procedure. Many of the cute remarks that are made at autopsies and much of the smoking is done by clinicians who attend. That much might be said in defense of the pathologist. When interns and clinicians are shown that they can get something out of the autopsies, I think it will be relatively easy to get more of them. Autopsies can be used to teach not only clinicians and interns but also medical students. Our students begin attending autopsies when they begin the subject of pathology. I have found that by going over the case soon after the autopsy, in the lecture room, and pointing out the mistakes in diagnosis, pointing out the important pathologic conditions that were not noted clinically, and then connecting up the various points of associated pathologic changes, we have stimulated interest in those amateurs materially.

For the juniors and seniors we have an elective course which is conducted somewhat in this fashion. The clinical history, or a full summary of it, is mimeographed and to that is attached the anatomic diagnosis from the autopsy record. These records are handed out to the students. They come with their microscopes and substage lamps; we have a full discussion, frequently we have one or more clinicians present, we have a full discussion of the clinical phases of the case in question, and then after the diagnostic possibilities have been gone over we present the gross pathologic material. After that has been examined we throw on the screen with a device that has come out fairly recently, a low-power magnification, about 10 diameters, I think it is, of the microscopic sections from that particular case, or at least from all of the organs which showed any essential pathologic changes. While those low-power magnifications of the specific sections are on the screen, the students are looking at the corresponding sections under their microscopes with the substage lamps. We attempt to have them do as much of it as they can, but juniors and seniors have forgotten much of their histopathology, and it is helpful to them to point out at least the important pathologic changes which can be shown with this low magnification and which they can see with the higher magnification under their own microscopes.

DR. S. H. BOYER, Duluth, Minn.: We doctors, for all you may say, are still family physicians; we get close to people. When Mrs. Jones loses her husband and is left with her little children to take care of, it is a calamity. She is grief stricken, and you doctors can't go to her and say, "Mrs. Jones, we want to make a postmortem examination on your husband." That is why the doctors don't ask for postmortem examinations; it is brutal, and they know it, everybody knows it. The living bereaved don't want to see their dead mutilated. But there is a way to approach these people, a good way, a kindly way. You may not do it personally, but somebody else may do it for you. Occasionally the undertaker will do it. Somebody can approach them, a mutual friend perhaps. You may be called in finally and be able to explain the need and advantage of autopsy and so secure the desired permission. You may say, "I have done everything that I could, I have tried to find out everything that may have ailed this patient, I have tried to determine the cause of the conditions observed, I have wanted to know what I could do to help. There may be something here that I don't know about." You will be honest when you say there may be something there that you don't know about, that you would like to know about, and perhaps if you can find out what that thing is you sometime may be able to help another one of the same family, maybe some relative, maybe some friend or maybe a stranger. You say you may be able to afford that help; you promise that you won't do anything that is hurtful to their sensibilities and that you will consider their feelings in all particulars. Nine times out of ten they will feel that the sympathy of their family physician, instead of being a false thing is a true thing, and that he is after all working in their interest and in the interest of humanity as a whole.

DR. R. C. BUERKI, Madison, Wis. I thought it might be of interest to you to know that at the University of Wisconsin, in spite of very limited physical facilities, our autopsy room is in the basement of another building not attached to the hospital. Our pathologic staff of the university is undermanned, and as a result we cannot always get pathologists to do the post mortems. In spite of that we secure about 30 per cent of our autopsies without any real drives on the part of the staff to get them, but rather through the intelligent cooperation of the interns who meet the patient when he comes to the hospital as a patient before he is dead, and meet the family. We put the responsibility of getting the autopsies on the interns; we put the responsibility of arranging for the disposal of the remains all up to the interns so that they feel keenly their responsibility. The clinical staff does not enter into it except with cooperation, which is indirect. The clinical staff never enters the situation; rarely does the resident staff; it is purely an intern proposition.

(To be continued)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALABAMA

Society News.—Walker County Medical Society gave a banquet, recently, at the First Christian Church, Jasper, in honor of Dr. Joseph A. Goodwin, Jasper, the only surviving charter member of the society. Dr. George S. Gilder, Carbon Hill, president of the society, presided, and among the speakers were Drs. William M. Cunningham, Corona, Hugh W. Stephenson, Oakman, and Howard J. Sankey, Nauvoo.

CALIFORNIA

Scabies Closes Schools.—The Mill Valley schools in Marin County were closed for ten days, March 2, it is reported, to check the rapid spread of scabies among the 600 school children.

The Lowest Typhoid Record.—There were 683 cases of typhoid reported during 1927 in California as against 1,023 in 1926. This is the smallest annual number of cases ever reported in California.

Lepers Sent to Carville.—Since 1922, when the National Leprosarium at Carville, La., was opened, California has sent seventy-one lepers to that institution, nearly all of whom were either foreign born or residents of other states. They are transported from California to Carville twice each year, in May and December, and the number transported in 1927 was twelve.

Hospital News.—The Eye and Ear Hospital of Los Angeles has moved into a new building at 500 South Lucas Avenue. The hospital maintains a charity outpatient clinic to which the staff gives its time gratuitously and where patients are carefully investigated by a social service department so that only those unable to pay are admitted. The new building is so arranged that its capacity can be increased if necessary by additions. The hospital was founded in 1922.

Society News.—The Los Angeles Surgical Society held a symposium, March 9, on the prevention and relief of postoperative complications, Drs. George Dock and Foster K. Collins speaking on gastro-intestinal ileus and peritonitis; Joseph K. Swindt on wound infection; Madison J. Keeney on respiration; Arthur Stanley Granger and Robert W. Langley on circulation; Robert V. Day on urologic complications, and Verne R. Mason, Roy E. Fallas and George G. Hunter on toxemias. Pathologic specimens were presented by Drs. Walter V. Brem and Simon H. Jesberg.

Smallpox Situation Improves.—The unenviable smallpox record of California showed a marked improvement in 1927. The smallest number of cases of smallpox in the state since 1919 had been 2,002 until 1927, when the number dropped to 935; in 1924 there were 9,445 cases. The largest number of deaths during the period was 236 in 1926. There were only five deaths in 1927; the smallest number of cases reported in California in the last ten years was in 1927.

Licenses Revoked and Suspended.—At the regular meeting of the state board of medical examination, Los Angeles, March 1, the licenses of the following physicians were revoked:

Dr. John Elmer Baker, Los Angeles, state narcotic violation.
Dr. James A. Hadley, Eureka, illegal operation.
Dr. Donald Eugene Harris, Los Angeles, alleged use of fictitious name.
Dr. George Carl H. McPheeters, Fresno, revealing professional secrets.
Dr. Frank B. Moran, Dallas, Texas, federal narcotic violation.
Dr. Milton A. Nelms, Walla Walla, Wash. (now inmate of McNeil Island Penitentiary), federal narcotic violation.

The board placed on five years probation Dr. Thomas J. Randall, Los Angeles, for illegal advertising, and Dr. Henry C. Wallace, Fresno, for violation of the federal narcotic law. Dr. Charles A. Bailey was placed on probation to April 1, 1929, for state narcotic violation. The right to practice of Dr. John Jacob Richstein, Los Angeles, was suspended for one year for violation of his terms of probation. The license of a naturopath by the name of J. F. Balzer, who is an inmate of San Quentin State Prison, was revoked on account of conviction of conspiracy to commit murder.

DISTRICT OF COLUMBIA

Nurse Awarded Medal for Saving Patient.—The ladies' board of the Emergency Hospital, Washington, has awarded a gold medal to Mabel Clark, a recent graduate from the training school for nurses at the hospital, for saving the life of a delirious patient. Columbus Bronson, colored, aged 39, was admitted to a room on an upper floor of the hospital last July. He became delirious, and as Miss Clark entered the room was about to jump from the window. She grabbed him by the foot, and called for help. The patient was rescued and left the hospital in a few days in good condition.

Neck "Twisted"—Patient Dies—Physical Therapeutist Held.—Washington newspapers have much to say about the death of a woman, aged 23, in the office of Louis W. Hoffman, physical therapeutist, who had given her an "adjustment" shortly before she died. A coroner's jury held Hoffman for action of the grand jury. At the inquest, a friend who accompanied the patient to Hoffman's office testified that she went there for treatment for headache, and that after treating her spine with an electric light, Hoffman gave some twists to her neck. In about fifteen minutes, it was said, the patient became pale, and a doctor of medicine was called. On arrival, he pronounced the patient dead. Hoffman said in his own defense that he gave the girl the customary treatment used by chiropractors in cases of severe headache. An autopsy was performed by Dr. Andrew M. MacDonald, who is said to have testified that death was due to a dislocation of the cervical vertebrae. Hoffman studied chiropractic in the city of Washington.

ILLINOIS

Health Promotion Week.—Every county in Illinois is requested by the state department of health to observe the program for health promotion week, the fifty-two southern counties in the state during the week of April 1-7, and the fifty northern counties during the week of April 22-28. Special health topics will be stressed each day. Physicians, clubs, churches and other organizations are requested to cooperate in bringing these subjects before the public.

Society News.—Dr. Alexander E. Horwitz, St. Louis, addressed the Belleville branch of St. Clair County Medical Society, February 1, on "Symptoms and Treatment of Flatfoot and Back Lesions."——Dr. Wilson R. Abbott, Chicago, addressed the Livingston County Medical Society, March 1, at Pontiac, on "Early Diagnosis of Systemic Tuberculosis."——Dr. Jacob J. Singer, St. Louis, guest of honor at a dinner, Quincy, March 12, addressed the Adams County Medical Society on "Newer Methods in Chest Diagnosis"; the program at the February 13 meeting of the society was furnished by the Marion County Medical Society of Missouri, the speakers being Drs. Howard B. Goodrich, Hannibal, on "Prevention of Puerperal Infection," and Francis E. Sultzman, Hannibal, "Throat and Upper Respiratory Infections."——The Green County Medical Society was addressed, March 9, by Dr. Harold Swanberg, Quincy, on "Radium Therapy with Special Reference to Uterine Hemorrhage," and Dr. Henry A. Chapin, Jackson, "X-Ray in Diagnosis and Treatment."

Chicago

Special Birth Control Clinic.—The medical advisory board of the Illinois Birth Control League has advised the establishment of a special birth control clinic for the treatment by qualified physicians of all cases referred for therapeutic reasons by members of the medical profession. This work will be carried on by the medical staff of the league at its office, 203 North Wabash Avenue, Thursdays, from 2:30 to 4:30; appointments may be made with the secretary by telephone, Central 1037.

Rongetti Sentenced—Judge Comerford's Statement.—Following conviction by a jury for the murder by abortion of Loretta Enders, Dr. Amante Rongetti, proprietor of the Ashland Boulevard Hospital, was sentenced, March 9, to die in the electric chair, April 13. He is said to be the first person sentenced to capital punishment in Cook County for a criminal operation, as well as the first in the county to be sentenced to die in the electric chair. Judge Comerford, in whose court the case was tried, read the following statement in denying a motion for a new trial:

The court gave counsel every opportunity to examine and determine the qualification and fitness of the jurors. The jury that tried the defendant was tendered to the court as acceptable and qualified.

Proof was made on trial: first, that the defendant performed a criminal abortion on the deceased and left this unhappy 19-year-old girl to die because she did not have any money and had not paid her bill; second, that the defendant refused to perform an indicated operation after the abortion had been performed, and after the symptoms of peritonitis had set in, and refused to send her to another hospital where she might have had such an operation performed; third, that the defendant signed a death certificate setting forth rheumatic endocarditis as the primary cause of death, and nephritis as the secondary cause of death, the death certificate indicating that the information and history came from the father of the deceased, who has been dead for about eighteen years; fourth, that the defendant undertook to pay the funeral expenses of the deceased up to the sum of $400; fifth, that in her dying hours the defendant turned a deaf ear to the pleadings of a heart-broken old mother that a priest of God might be with her daughter at the end.

No one took the witness stand to challenge, dispute or deny these terrible truths; not one word of testimony was offered by the defense in answer to this proof.

Having criminally robbed this young girl of her life, her memory was assailed by filthy and false insinuations, charging her with two loathsome diseases.

As an act of justice to her memory, the court points to the testimony of Drs. Epstein, LeCount, McNally, Culbertson, Sonnenschein and Tonney.

These doctors answered suspicion with science. They proved conclusively and completely that this murdered mother was clean. The jury found the defendant guilty of a most revolting and brutal murder and fixed the punishment at death. The defendant was accorded every right and protection of the law.

The inquiry by the court into the alleged intimidation of witnesses was outside the presence of the jury. The court would have been guilty of a definite dereliction of duty if the court had not acted outside of the presence of the jury to determine grave charges made concerning methods and practice that threatened justice in its own house.

The defendant had a fair trial by a jury of his own choosing.

Therefore, the court overrules the motion for a new trial.

KENTUCKY

Bills Introduced.—House bill 620 provides an entire new workmen's compensation law. The law provides for medical, surgical and hospital treatment for injured employees. House bill 311 provides for the sterilization of inmates of state institutions.

LOUISIANA

Dr. Castellani Has Been Knighted.—In recognition of his distinguished service to the British government in the field of tropical medicine, the honor of knighthood has been conferred on Dr. Aldo Castellani, professor and director of the department of tropical medicine, Tulane University of Louisiana School of Medicine, New Orleans. Dr. Castellani was born in Florence, Italy, but spent most of his childhood in England. In 1902, working in Germany under Professor Kruse, he discovered the "absorption test" for the differentiation of closely allied organisms. In 1903, he was invited by the British government to conduct research on sleeping sickness in Africa, where he discovered the cause of the disease to be a trypanosome. The British government called him to be director of the Institute of Bacteriology at Colombo, Ceylon, where he became head of the clinic of tropical diseases and devoted ten years to research. Dr. Castellani discovered that *Spirochaeta pertenuis* is the causative agent of yaws, a common disease in many tropical countries. In recent years he has devoted much time to the investigation of fungi and fungal diseases and of symbiosis. He has devised mycologic methods for the identification of various sugars, and has described a symbiotic fermentation phenomenon which is used in the differentiation of various bacteria. He is the joint author with Dr. Albert J. Chalmers of the well known "Manual of Tropical Medicine." Dr. Castellani served with the Italian army during the World War, then returned to London as director of tropical medicine and physician in the Ross Tropical Institute and Hospital, and lecturer in the London School of Tropical Medicine. He accepted the chair of tropical medicine at Tulane University in 1925.

MAINE

Personal.—Governor Brewster has nominated Dr. Fred E. Wheet, Westbrook, as medical examiner for Cumberland County to succeed Dr. Frank Leslie Ferren.——Dr. James W. Loughlin has been appointed health officer of the third district with headquarters at Newcastle, succeeding Dr. George E. Parsons, who has resigned to enter practice at Millinocket.——Mr. Walter D. Thurber has resigned on account of ill health as executive secretary of the Maine Public Health Association after about seven years' service, and has moved to California.

MARYLAND

Hospital News.—The Emergency Hospital, Annapolis, was practically destroyed by fire recently.——The Sheppard and Enoch Pratt Hospital, Towson, which is a psychiatric institution, has completed plans to construct a seventy-five bed reception hospital and diagnostic clinic. This will give the institution a total capacity of about 220 beds. The hospital was founded seventy-five years ago by Moses Sheppard, who left $600,000 for its support. Later, Enoch Pratt gave $1,500,000.

Personal.—Dr. John R. Devereaux, Chevy Chase, has been appointed medical director for the Catholic Near East Welfare Association; he will go to Europe to make a survey of public health conditions in the Near East, and will recommend such relief measures as the association may be able to offer.——Dr. Paul Preble has been loaned by the U. S. Public Health Service to the Maryland State Department of Health to take charge of the bureau of vital statistics pending the selection of a physician to that position; Dr. Preble will continue his work at the Johns Hopkins School of Hygiene and Public Health while with the state department of health.——Dr. Lewis R. Thompson, U. S. Public Health Service, delivered a De Lamar lecture on "Industrial Pneumonoconioses," February 7, at the School of Hygiene and Public Health, Johns Hopkins University, Baltimore.——Dr. Howard A. Kelly, who celebrated his seventieth birthday, February 20, expects to take part in a geologic expedition to Utah in the spring.

Society News.—Dr. John C. Hemmeter, emeritus professor of clinical medicine, University of Maryland School of Medicine and the College of Physicians and Surgeons, Baltimore, addressed the History of Ideas Club, Johns Hopkins University, February 14, at Gilman Hall, on "The Prerequisites to a Philosophy of History."——Dr. Eugene H. Hayward addressed the Baltimore County Medical Association, February 15, on "Diagnosis of Acute Abdominal Conditions," and Dr. Thomas K. Galvin on "Diagnosis of Acute Pelvic Conditions."——Dr. Downey L. Harris, St. Louis, Mo., lectured on rabies at the Johns Hopkins University School of Hygiene and Public Health, February 21.——Lieut. Col. Fielding H. Garrison, medical corps, U. S. Army, addressed the Book and Journal Club of the Medical and Chirurgical Faculty of Maryland, March 8, on "Present Sources and Future Prospects of Medical Biography," and Dr. Charles W. Burr, Philadelphia, on "Dr. James, Dictionary Maker and Inventor of James Powder."——Dr. Percy W. Cobb, Nela Park, Cleveland, gave a public lecture on "Use of Artificial Light," March 6, at Johns Hopkins University School of Hygiene and Public Health.——Dr. John R. Oliver, Baltimore, will give a series of lectures on the history of medicine, Thursday afternoons, during March, April and May, at 5 p. m., at the University of Maryland.

MASSACHUSETTS

Bill Introduced.—House bill 1029 provides that all persons handling foods or drugs for sale to the public must be examined to ascertain whether they have any contagious, infectious or other disease which may be injurious to the public.

Society News.—George Barger, professor of chemistry, University of Edinburgh, lectured at the Medical School of Harvard University, March 9, on "Thyroxine and the Thyroid Gland."——The Trudeau Society of Boston will meet, March 21, at 8:15 p. m.

History of Medical Journalism.—The first number of the *New England Journal of Medicine*, successor to the *Boston Medical and Surgical Journal*, has an illustrated article by Dr. Joseph Garland, giving a brief summary of its history. There is also an article on "A Century of Surgery" by Dr. David Cheever, describing the pioneer surgical work done in New England; an article on the beginnings and development of the *Boston Medical and Surgical Journal* by Dr. Edward C. Streeter, and an address by Dr. Morris Fishbein, Chicago, on "Medical Journalism and the Boston Medical and Surgical Journal," delivered at the recent celebration of its centennial.

MINNESOTA

Personal.—The late Dr. George G. Eitel bequeathed to the University of Minnesota $80,000 to provide a fund for needy medical students and a loan scholarship.——Dr. Hannibal H. Kimball, Minneapolis, will give a suitable reward for the return of his lost album of early European surgeons, which has been freely loaned to libraries, clinics and individuals.

Health at Duluth.—Telegraphic reports to the U. S. Department of Commerce from sixty-eight cities with a total population of about 30 million, for the week ending March 3, indicate that the lowest mortality rate (8.5) was for Duluth, and that the mortality rate for the group of cities was 14.5. The mortality rate for Duluth for the corresponding week last year was 7.3, and for the group of cities, 13.7.

Boyd T. Williams Arrested and Fined.—The first case brought about by the new basic science bill is said to be that of Boyd T. Williams, Minneapolis, who pleaded guilty, February 21, to a charge of practicing without a license and was fined $100. Prosecution of this case under the new act, it is said, will be followed by similar charges elsewhere in the state. Violation of the act may be punished by a thousand dollar fine or a year's imprisonment. Boyd T. Williams has for some years conducted what is known as the "Williams Sanitarium" in Minneapolis. Although Williams has announced in some of his printed matter that he "personally conducts the examination and treatment of all patients," he is not licensed to practice medicine in Minnesota. According to state officials, he has been arrested at various times and fined. The fines, however, have apparently been small. On different occasions the State Board of Medical Examiners of Minnesota has appeared, in the person of its secretary, before the Hennepin County grand jury in an attempt to get the Williams case into a court of record instead of the police court, but, so far as is known, no grand jury has ever brought an indictment against the man. It is apparent, from information on file, that Williams uses caustic paste in the treatment of cancer.

Banquet to Dr. Taylor.—The guest of honor at the annual banquet of the medical staff of Lymanhurst School, Minneapolis, March 28, will be Dr. Henry Longstreet Taylor, president this year of the National Tuberculosis Association. Invitations have been extended to physicians, nurses and interested laymen, including the governor of the state and the mayor of the city. Dr. Taylor has been engaged in antituberculosis work since 1893. He is said to have opened, in 1905, the first permanent institution for the treatment of tuberculosis in Minnesota. The Lymanhurst School is a public day school, operated jointly by the board of education and the board of public welfare for the children in whom a positive diagnosis of tuberculosis has been made. They are given special diet, a rest period and such other treatment as can be given in a day school. There are no beds. The staff includes specialists from every branch of medicine, and the thirty-six members of the staff serve voluntarily. The school is under the immediate supervision of the city health commissioner. The banquet honoring Dr. Taylor will be under the auspices of the staff of the school, the Minnesota Trudeau Society and the state and county public health associations. Among the speakers will be Drs. Louis B. Wilson, Rochester, and William A. Evans, Chicago.

The Lymanhurst school.

MISSISSIPPI

Society News.—Dr. Van Buren Philpot, Houston, was elected president of the Tri-State Medical Association at Memphis, Tenn., March 1.——The Pearl River County Hospital, Poplarville, was completely destroyed, recently, by a boiler explosion.

Bills Introduced.—House bill 591 provides for the sterilization of inmates of state institutions for insane and feebleminded persons.——Senate bill 132 provides for the licensing of chiropractors by the state board of health. Senate bill 296 provides for a state board of examiners in chiropractic, and regulates the practice of chiropractic. Senate bill 244 provides for the repeal of the $10 occupational tax on dentists, physicians, etc.

MISSOURI

The Hodgen Lecture.—Dr. Dean D. Lewis, professor of surgery, Johns Hopkins University School of Medicine, Baltimore, will deliver the Hodgen lecture, March 20, before the St. Louis Medical Society on "Reconstruction Surgery." The students of medicine of St. Louis University and Washington University are specially invited.

Failures Among Students at Missouri.—The registrar of the University of Missouri, Columbia, announced, February 18, that 331 students had failed at the close of the fall semester, January 21, to pass their required work. Of these 156 were permanently eliminated from the university unless special dispensation is granted by the university authorities; the remaining 175 of those who failed were first offenders and were allowed to continue their studies on probation.

Personal.—Dr. Ferdinand C. Helwig has been appointed full-time pathologist to St. Luke's Hospital, Kansas City.——Dr. Edward H. Skinner, Kansas City, was presented with a desk chair by the Southwest Kansas City Clinical Society in appreciation of his work for the society, which he is said to

have originated.——Dr. Louis J. Wolfort, St. Louis, has been appointed to the Missouri Nurse Examiners Board by the governor to succeed the late Dr. Edward W. Saunders.

Shriners' Hospitals for Crippled Children.—At a meeting of the board of trustees of the Shriners' Hospitals for Crippled Children, St. Louis, February 13, it was brought out that about $8,000,000 had been expended for the construction, equipment and operation of the ten permanent hospitals and five mobile units maintained by the Shriners, and that the St. Louis hospital, the largest one in the chain, has the only research department. The trustees authorized the expenditure of $200,000 for a nurses' home and training school adjacent to the St. Louis hospital. Dr. Leroy C. Abbott, St. Louis, was elected president of the organization of chief surgeons of these hospitals.

Society News.—Dr. Ralph R. Wilson addressed the Bourbon County Medical Society, Fort Scott, Kan., on the "First Trimester of Pregnancy," and Dr. Homer A. Beal on "Mastoiditis in Infancy."——Dr. Donald R. Black addressed the Crawford County Medical Society, Girard, Kan., February 17, on "Anemia," and Dr. James G. Montgomery on "Diseases of the Spleen."——The Boone County Medical Society conducted a symposium at its March meeting on obstetrics: its management and complications.——Dr. Thornton E. Moore, Trenton, addressed the Grundy County Medical Society, recently, on "Micrococcus Tetragenus Infection from Mouse Bite with Report of Case."——Dr. Marsh Pitzman addressed the St. Louis Medical Society, March 6, on "A Working Hypothesis as to the Cause and Prevention of Infantile Paralysis"; Dr. William Kerwin on "Reliable Method for Control of Hemorrhage in Placenta Praevia," and Dr. Francis L. Reder on "Incisional Hernia."

NEW JERSEY

Bills Introduced.—House bill 193 would allow the use of drugs and surgery by osteopaths. House bill 206 provides for court-appointed expert witnesses. House bill 296 provides for the licensing, without examination, of blind persons who are graduates of a school of chiropractic. House bill 429 provides that when a county physician is unable to determine the cause of death, he may, if he deems it necessary, order that a postmortem examination be performed.

NEW YORK

Number of Midwives Decreases.—During 1927, the number of licensed midwives in New York, exclusive of the metropolitan area, decreased from 375 to 320. Twelve new licenses were issued; six were refused licenses for 1928; three had their licenses held up for investigation; forty-three gave up their licenses or failed to renew them; fourteen moved out of the state, and seven died. The number of births attended by midwives also decreased from 6,974 in 1926 to 5,758 in 1927, according to the monthly reports of midwives. According to *Health News* of the New York State Department of Health, five maternal deaths, eight infant deaths, one case of ophthalmia neonatorum, and three cases of puerperal septicemia were reported by midwives.

Newly Discovered Typhoid Carriers.—In upstate New York, exclusive of the state institutions, twenty-five newly discovered typhoid carriers were added to the list of the state department of health during 1927, making the total number on the list 155. Forty-seven cases of typhoid were traced to these carriers; eight carriers were male and seventeen female; their ages ranged from 21 to 66. One had typhoid as long ago as 1871, and four stated that they had never had typhoid. It is interesting to note that the history of these newly discovered carriers, as given in *Health News,* shows that one was a school teacher and one a soda dispenser and dishwasher in a restaurant. There were six cases among the patrons of this restaurant. One was a housewife on a dairy farm. No cases were traced to this patient. The milk was sent to a condensed milk plant.

Society News.—A conference was held, January 11, by representatives of the state medical society, the state department of education and the deans of medical colleges to discuss the training of students to practice preventive medicine and especially to make periodic examinations of apparently well persons.——A symposium on pneumonia was conducted by the Syracuse Academy of Medicine, February 21, Drs. Oliver W. H. Mitchell speaking on "Laboratory Aids in Pneumonia"; Percival K. Menzies, "Postoperative Pneumonia"; Mandell Shimberg, "Traumatic Pneumonia," and Charles D. Post, "Treatment of Pneumonia."——The Medical Society of the County of Nassau has undertaken publication of a monthly bulletin known as the *Nassau Medical News* for the purpose of establishing closer contact between the medical society and the people in the county.——Dr. Paul D. White, Boston, addressed the Rochester Medical Association, Rochester, March 7, on "Cardiovascular Observations: Progress in the Last Decade."

New York City

Report of Dean.—Dr. Samuel A. Brown, dean, University and Bellevue Hospital Medical College, in a report to the chancellor of New York University, stated that only 126 of the 528 applicants for admission to the medical college last fall could be admitted because of limitation of facilities. In the last two years, all students entering the college for the first time either held a bachelor's degree or were entitled to one on completion of the first year of medicine. Of the 104 members of last year's graduating class, each one had a hospital appointment by September. Dean Brown stated that the dispensary of the medical school had 117,959 patients during the last year, 20,000 of whom came for the first time.

Bronchoscopic Club Organized.—Following a dinner at the Columbia University Club, February 21, the New York Bronchoscopic Club was organized with Drs. Frank R. Herriman, president, Henry H. Forbes, vice president, and Westley Hunt, secretary. The guest of honor, Dr. Chevalier Jackson, Philadelphia, traced the growth of bronchoscopy from a pioneer movement to its present world-wide recognition in medical circles. Bronchoscopic work in Europe was reviewed by Dr. C. Calatayud of the University of Madrid; Dr. Louis Gregory Cole, New York, exhibited pictures of massive collapse of the lung, which demonstrated the importance of cooperation among the specialists represented in the new organization—internists, thoracic surgeons, roentgenologists, pathologists and peroral endoscopists.

Society News.—The matter of changing the name of the Medical Society of the County of Kings to Medical Society of the County of Kings and Academy of Medicine of Brooklyn will be acted on at the March meeting.——Dr. John Guttman addressed the American Physical Society at Columbia University, February 25, on "Effect of an Interfering Tone on a Normal and a Deafened Ear."——The Queens County Medical Society has appointed a committee to appeal to Mayor Walker to authorize the establishment of a city hospital for the poor in Queens. The chairman of the committee, Dr. Edward J. Buxbaum, stated that Queens should have a hospital of at least 250 beds, and that it was the only borough without a municipal hospital.——Dr. Sergius M. Ingerman was elected president of the Russian Medical Society of New York at the annual meeting, February 22, and Dr. Benjamin O. Alpern, secretary.

Births Attended by Midwives.—The number of births in New York attended by midwives has gradually decreased since 1909, when more than 40 per cent of the births were attended by 3,131 midwives. In 1926, apparently the last year for which the city health department has completed its compilation, 17 per cent of the births were attended by 1,297 midwives. While the number of midwives has decreased, the average number of cases delivered by each has slightly increased. In New York, in 1926, midwives attended 21,068 births. Regulations governing the practice of midwifery have been made more stringent, and the unfit have been gradually eliminated. During 1926 only one permit was revoked for infractions. Midwives may deliver only normal cases. They must call a physician for any untoward condition that arises during pregnancy. The infrequency with which abnormal conditions such as sepsis and ophthalmia neonatorum are found in their practice indicates, the health commissioner states, their promptness in referring every case of this character to a physician.

Physicians' Art Exhibit.—The second annual physicians' art exhibit will be held at the New York Academy of Medicine during the first two weeks in April under the auspices of the New York Physicians' Art Club. The superintendent of the academy will receive exhibits up to the third week in March. A limit is placed this year on wall space for pictures, about 25 square feet being available for each individual. As in last year's exhibit, paintings, etchings, pastels, sculpture, wood-carving and examples of industrial arts will be acceptable, provided they are original and were not shown last year. No unframed pictures will be shown. The exhibitor should attach to each separate piece a written label indicating his name and address and the name of the exhibit; duplicates of these labels should be mailed to the physicians' art exhibit committee, care, superintendent, New York Academy of Medicine, One Hundred and Third Street and Fifth Avenue. There will be no jury of selection and no rejections except for lack of space.

Organization Meeting—Anecdotes of the World War.—Hospital Center number 6 will hold its first organization meeting, March 23, at the Army Building, 39 Whitehall Street, for the purpose of ascertaining the individual duties of the officers. The hospital center is under the command of Col. Joseph C. DeVries, medical reserve, who requests members to come in uniform if convenient, but, the announcement adds, "civies will not be frowned upon." Col. Harlow Brooks, medical reserve, now assigned to the army medical school, Washington, D. C., will speak on "Hospitalization in the Army Area," and Lieut. Col. Graeme M. Hammond, medical reserve, on "Psychosis and Neuropsychosis Observed in Conscription and Militia Divisions." Lieut. J. D. Sullivan of the navy intelligence department will relate "Some Thrilling and Hair-Raising Anecdotes of the Late War." Credit for attendance will be noted on the records and, in accordance with regulations covering the reserve corps, will count toward promotion. Others present will be the corps area surgeon, Col. Albert E. Truby, and his assistant, Major Ralph G. DeVoe.

PENNSYLVANIA

Special Meeting at Pittsburgh.—The March 20 meeting of the Allegheny County Medical Society, Pittsburgh, will give a scientific program consisting of addresses by Drs. Viola Z. A. Johnston on "Treatment of Skin Malignancy with Radium"; Alexander R. Hampsey, "Paranasal Sinus Disease in Young Children," and William E. Hart, "Chronic Lesions of the Appendix as a Cause of Toxemia." At 9:15 p. m., plans to bring to the attention of voters at the spring primaries the threat made by "the outlaw chiropractors' association" against licensing standards, treatment of indigent patients in state-aided hospitals, public health regulations, and the entrance standards of universities, will be discussed. Licensed physicians, members of the women's auxiliary and others interested in hospital management and welfare work are invited to this meeting in Carnegie Lecture Hall on Forbes Street.

Society News.—Dr. Howard B. Erdman, Macungie, gave an illustrated lecture before the Lehigh County Medical Society, February 14, on diagnosis and treatment of diseases of the rectum.——Dr. Herbert H. Holderman, Shenandoah, was awarded the honorary degree of master of science in surgery, February 18, by the council of the University of Pennsylvania.——Dr. Joseph H. Barach, Pittsburgh, addressed the Washington County Medical Society, February 23, on "Essential Vascular Hypertension."——The Dauphin County Medical Society, Harrisburg, held a symposium, February 7, on pharmacology and clinical application of cardiac drugs; there were twelve members on the program, each limited to ten minutes discussion. Dr. Thomas Grier Miller, Philadelphia, gave an illustrated talk before the Harrisburg Academy of Medicine, February 21, on diagnostic data in gastric and duodenal ulcers.——Drs. Alexander Randall and Percy S. Pelouze, Philadelphia, addressed the Pittsburgh Urological Association, March 12, on "Genesis, Morphology and Surgery in Hypertrophy of the Middle Lobe of the Prostate" and "Gonorrhea—in Fallacy and in Fact," respectively.——The Pittsburgh Pediatric Society was addressed, March 16, by Drs. Harvey M. Watkins and Henry D. Gaynor of the state school at Polk on mental and endocrine studies.

Philadelphia

Society News.—Dr. Kellogg Speed, Chicago, addressed the Philadelphia Academy of Surgery, March 5, on "Unhappy Results in the Treatment of Fractures," and Dr. Fraser B. Gurd, Montreal, on "Treatment of Fractures Involving the Ankle Joint."——"Reminiscences of an Older Laryngologist" was the subject of an address before the Philadelphia Laryngological Society, March 6, by Dr. D. Bryson Delavan, New York.

Tercentenary of Publication of Harvey's "De Motu Cordis."—The College of Physicians of Philadelphia has issued invitations to exercises commemorating the tercentenary of the publication of William Harvey's work "De Motu Cordis," in which he gives the first account of his discovery of the circulation of the blood. At the exercises in the college building, Thursday evening, March 22, Sir Humphry Davy Rolleston will give the Mary Scott Newbold lecture on "Harvey's Predecessors and Contemporaries." The Nathan Lewis Hatfield lecture will be given by Prof. John J. R. Macleod, University of Toronto Faculty of Medicine, on "Harvey's Experiments on Circulation." There will be an inspection of the exhibition of Harveyana from the collection of the college of surgeons and other sources.

SOUTH CAROLINA

Bill Introduced.—House bill 1598 prohibits the sale of any preparation or mixture containing in excess of 20 per cent of alcohol, without a prescription from a licensed practicing physician, authorizing such sale.

VIRGINIA

Bills Introduced.—House T. N. 44 regulates the issuance of degrees and diplomas from any school teaching any branch of the healing art. House bill 165 provides that when a physician examines a patient as to his sanity, he shall receive his fee whether or not such patient is found insane.

GENERAL

Psychiatric Clinics for Children.—The Directory of Psychiatric Clinics for Children in the United States is being revised and brought up to date. An attempt is being made to include in the new directory every clinic in the United States offering a psychiatric service for children. Any clinic maintaining such a service which has not received a questionnaire to be filled in regard to its work should communicate immediately with the division on community clinics, National Committee for Mental Hygiene, 370 Seventh Avenue, New York City.

Negro Health Week.—The fourteenth observance of National Negro Health Week will be April 1-8, when state and city health departments, volunteer organizations and numerous other agencies will cooperate with the U. S. Public Health Service to improve the health and living conditions of the negro race. As formerly, each day of the week will be set aside for a specific purpose, and a special negro health week bulletin will be issued giving effective methods of carrying out the program. In addition, three-color posters giving appropriate information will be distributed free in a limited quantity, and other copies may be purchased at nominal cost from the superintendent of documents, government printing office, Washington, D. C.

International Oto-Rhino-Laryngological Congress.—The first International Congress of the Oto-Rhino-Laryngological Congress will be held in Copenhagen, Denmark, July 29-August 1, the American Committee has announced. The United States will be represented by more than seventy-five delegates, who will sail from New York, July 6, on the *Caronia*. Membership is by invitation only. The cost, including attendance at the congress, will be $987, which covers every ordinary expense; 15 per cent should be paid on making application for a reservation. The party will spend about six weeks in Europe, sailing for home on the S. S. *United States*, August 9. It will visit clinics in France, England, Germany, Norway and Sweden. Detailed arrangements may be made with the American Committee, Suite 656, 25 Broadway, New York.

Correction—Dust in Air of Cities.—In a general news item, January 7, THE JOURNAL published a list of cities giving the number of dust particles per cubic foot in the air of each as published in the New York *Times*, Dec. 7, 1927. The city manager of Cincinnati, Mr. C. O. Sherrill, writes that this article does an injustice to that city. He has received information from Mr. H. C. Murphy, indicating, Mr. Sherrill says, that the figures quoted were unreliable and showing that Mr. Murphy gave them out after making four tests at various localities in the cities, and eight tests in a period of four years in Cincinnati, using his own discretion as to the location of the tests and the method of taking them. Mr. Sherrill gives the following quotation from Mr. Murphy's letter:

> The figures given in my paper are in each case the result of at least four tests taken at various localities in the downtown districts of the cities in question. In Cincinnati I have made eight tests covering a period of four years in the downtown districts, using the Hill Dust Counter, taking air at approximately 5 feet above the sidewalk on days which are as nearly typical of winter dust conditions as possible.

Mr. Sherrill has corresponded with the U. S. Weather Bureau in an effort, he says, to secure reasonably accurate comparative tests of air content throughout the largest cities of the United States.

Society News.—The Pacific Coast Oto-Ophthalmological Society will meet, April 18-20, and the western section of the American Laryngological, Rhinological and Otological Society, April 21, at Santa Barbara, Calif.——Dr. Edward L. Keyes, professor of clinical surgery, Cornell University Medical College, New York, has been elected president of the American Social Hygiene Association for 1928, and Dr. Donald R. Hooker, Baltimore, secretary. The honorary president is Dr. William H. Welch, Baltimore.——Dr. Law-

son G. Lowrey was elected president of the American Orthopsychiatric Association at the fifth annual meeting in New York, February 25, which was attended by 540 persons; twenty-two papers were read at this meeting. A conference of executives of child guidance clinics, held for three days at the Institute for Child Guidance, New York, was attended by representatives of twelve different clinics.——Dr. John H. Musser, professor of medicine, Tulane University of Louisiana School of Medicine, New Orleans, was elected president-elect of the American College of Physicians at the New Orleans meeting, March 8; Drs. Aldred S. Warthin, Ann Arbor, Mich., and Solon Marx White, Minneapolis, were reelected vice presidents; Dr. Williams McKim Marriott was elected third vice president, and Drs. Clement R. Jones, Pittsburgh, and George M. Piersol, Philadelphia, were reappointed treasurer and secretary-general, respectively.

The New Ransdell Bill.—Senator Ransdell has introduced a bill, S. 3391, which provides for the creation of a national institute of health under the jurisdiction of the secretary of the treasury and the administrative control of the surgeon general of the public health service. It would be devoted to scientific research in the fundamental problems of diseases in man and matters pertaining to health. For this purpose, the treasury would appropriate $10,000,000, or as much thereof as might be necessary. The bill also authorizes the acceptance on behalf of the United States of gifts by will or otherwise for the study of disease. The surgeon general would be authorized to establish fellowships and to utilize the proceeds thereof in aid of scientists who demonstrate proficiency in research. Professors, instructors and experts could be appointed on recommendation of the surgeon general without regard to civil service laws. The provisions of this bill correspond with those in a bill previously introduced by Senator Ransdell, which embodied also the provisions of the original Parker bill in the House. The passage of the Parker bill in an amended form seems to have suggested the expediency of the introduction of this revised Ransdell bill. Senator Ransdell has decided to postpone hearings on the new bill for a week or two to aid in the passage of the Parker-Jones bill, which provides for the coordination of public health activities of the government (THE JOURNAL, March 10, p. 781).

B. J. Admits Chiropractic Is Doomed.—In addressing a meeting of 500 chiropractors and sympathizers in Philadelphia, February 26, Mr. B. J. Palmer, "the daddy of chiropractors," made some illuminating remarks. According to the *Pittsburgh Medical Bulletin*, he said: "Fully 80 per cent of the chiropractors in Pennsylvania are practicing medicine, not chiropractic. That is a sorry fact, gentlemen—we are practicing medicine. During the last year, I have been in every state in the Union, and this condition exists throughout. My ideals concerning chiropractic were shattered. Chiropractic is doomed. You have drifted so far from the basic principles of chiropractic that you have lost your identity and brought the basic science bill upon your heads. Twenty-eight chiropractic schools have closed recently, and many others will follow. The supreme courts in seven states have handed down legal injunctions during the last eighteen months, whereby these states are lost forever to chiropractic. I warned Ohio not to compromise. They tried to pass a bill engrossing medical principles and practices. I predicted its failure. It lost by 250,000 votes. There has been $250,000 of chiropractic money spent in California in the last year. You cannot defeat the ends of science. The basic science bills are the buck shot which we deserve for trespassing. When chiropractors preach and practice and try to become physicians, then it is justifiable for the medical men to educate the chiropractor. Now beat that argument if you can. That is why we are losing right along. This will probably be the last time you will see me as a chiropractor, as I do not propose to lose my good money in fighting against sound arguments." Incidentally, it is said that the number of students at Mr. Palmer's million dollar school at Davenport, Iowa, has decreased from 3,500 to about 300.

CUBA

Dr. Agramonte Honored.—Among many distinguished speakers at the New Orleans meeting of the American College of Physicians, was Dr. Aristides Agramonte, Havana. Dr. Agramonte was given an ovation when he rose to review the adventure of those who demonstrated that yellow fever was transmitted by means of mosquitoes; he was a member of that renowned group of army officers—Reed, Carroll, Lazear and Agramonte—which was appointed by the United States to conduct the investigation in Cuba. At a special meeting of the faculty, members of the American College of Physicians, students and citizens of New Orleans, Dr. Agramonte was awarded the degree of doctor of laws by Tulane University. The yellow fever situation in 1878 was described by Dr. Allan C. Eustis. More than 4,000 deaths occurred in the city at that time, while closed trains, Dr. Eustis said, left the city in all directions carrying frantic citizens who believed that yellow fever was spread by contact. Dr. Agramonte was guest of honor at a luncheon of the New Orleans Association of Commerce which presented him with a gold life membership in recognition of the gratitude of New Orleans for his part in the investigation of yellow fever.

FOREIGN

Influenza in Tokyo.—Half a million persons were reported in news dispatches, March 5, to have been stricken with influenza in Tokyo, of whom about 2,000 had died. The emperor himself was ill, and his 6 months old daughter, Princess Hisa, is reported to have died of influenza.

Number of Physicians in Australia.—The *Medical Journal of Australia* states that the number of medical practitioners in Australia has increased from 4,773 in 1925 to 5,231 in 1927, or 4.37 per cent a year. The general population is increasing at the rate of about 2 per cent a year. In New South Wales there are said to be 2,134 medical practitioners; in Victoria, 1,692; in Queensland, 551; in South Australia, 449; in Western Australia, 254, and in Tasmania, 151.

German Society of Internal Medicine.—This society will meet in Wiesbaden, April 16-19, under the chairmanship of Prof. L. R. Mueller. The general topic for discussion will be the influence of cancer on metabolism. There will be a joint meeting with the German Pathological Society, April 19; the subjects for discussion at this meeting will be chronic hypertrophy of the spleen, the normal spleen as a blood vessel, the clinical aspect of splenomegalias, and the pathologic anatomy of hypertrophies of the spleen.

Professorship in Hormone Chemistry.—After much effort on the part of the faculty, Tokyo Imperial University has decided to establish a course in hormone chemistry in the medical department beginning in April. The *Japan Medical World* considers this to be the first course of its kind. The cost of maintaining the laboratory for the course has been donated by the society for the advancement of pharmacology in an amount believed to be between 200,000 and 300,000 yen. Dr. Akira Ogata will be promoted to the rank of professor and placed in charge of the laboratory; he has been studying hormone chemistry in Europe for two years.

Course in Psychiatry in English at Vienna.—An intensive course of fifty days, six hours daily, in neurology and psychiatry will be given in English at the Neuropsychiatric Clinic of Prof. Wagner von Jauregg and the Neurological Institute of Professor Marburg at the Vienna University during June and July. The fee will be $214, including subscription at the American Medical Association of Vienna, under whose auspices the course is provided. Applications accompanied by a certified check of $50 sent to Docent Dr. E. Spiegel, I, Falkestrasse 3, will be accepted in order of priority. More than twenty teachers will assist.

Centenary of Glasgow Medical Journal.—The February issue of the *Glasgow Medical Journal*, the centenary number, is largely a review. The birth of the journal in 1828 appears to be obscure. The present editor was unable to find information about any organization which brought it into being. In a history of the journal are pictures of its editors, among whom were William MacKenzie, William Leishman, William Weir and Joseph Coats. There are contributions on the medical school of Glasgow University, 1828-1928; medical journalism by the editor of *The Lancet*, Sir Squire Sprigge; the progress of therapeutics, and the Glasgow hospitals of a century ago.

Tercentenary of William Harvey's "De Motu Cordis."—Delegates and distinguished guests from various parts of the world have been invited to London to participate in the tercentenary celebration by the Royal College of Surgeons of the publication of William Harvey's "De Motu Cordis," beginning May 14. According to the *British Medical Journal* the college will revive on this occasion an honor that it bestowed seldom in the four centuries of its existence by electing to honorary fellowship the Earl of Balfour, Sir Ernest D. Rutherford, and Profs. Ivan Petrovitch Pavlov and Karl Friedrich Wenckebach, each of whom has rendered signal service in the advancement of medical science.

Government Services

Army Personals

The resignations of Major Roy Lorraine Scott and Capt. William D. Gill as officers of the army have been accepted by the President. Capt. Joseph I. Martin has been assigned to duty at Carlisle Barracks, Pa., following a course of instruction at the infantry school, Fort Benning, Ga. Major Henry L. Kraft is relieved from Fort Bliss and assigned to Camp Marfa, Texas. Major Charles E. MacDonald will be relieved from Camp Marfa and assigned to Fort Bliss. Capt. Guy B. Denit will report to the surgeon general, Washington, D. C., for duty in his office. Major Glenn I. Jones is relieved from duty as student at the army war college on completion of the present course and will proceed to Carlisle Barracks, Pa., for duty with the first medical regiment. Capt. Roy F. Brown is relieved from assignment at Fort Jay, N. Y., and will report to the commanding officer, Walter Reed General Hospital, Washington, D. C., for duty. Capt. Anthony J. Vadala will proceed from U. S. Army Soldiers' Home, Washington, D. C., to Fort Jay for duty. Capt. Edward L. Moore will proceed from Jefferson Barracks, Mo., to the U. S. Soldiers' Home, Washington, D. C., for duty. Major William E. Hall is relieved from Fort Meade, S. D., and will proceed to Jefferson Barracks. Capt. Charles A. Bell is relieved from duty at the Letterman General Hospital, San Francisco, and will proceed to Fort Meade for assignment to duty. The following officers have been ordered to the army war college for duty as students in the 1928-1929 course: Lieut. Col. Frank W. Weed, and Majors Joseph E. Bastion and Francis X. Strong. Majors Albert S. Dabney and Garfield L. McKinney have been relieved from duty at Carlisle Barracks, Pennsylvania and detailed as additional members of the general staff corps, Washington, D. C. Major Albert P. Clark has been relieved from duty as a member of the general staff corps in the office of the chief of staff, effective June 30, and will proceed to Fort Sam Houston, Texas, for duty. Major Joseph de R. Moreno is relieved from duty at Fitzsimons General Hospital, Denver, and will sail from San Francisco about March 21 for New York, proceeding to West Point for assignment to duty.

Examination for Entrance in Army Medical Corps

The War Department announces an examination for appointment as first lieutenants in the medical corps of the regular army, July 9-13, to fill the thirty-nine vacancies that exist in the corps at present. Applicants must be graduates of recognized medical schools, between 23 and 32 years of age, who have had one year internship and are licensed to practice. The salary of first lieutenants ranges from $2,700 to about $3,100. When commissioned, these officers are usually sent to the army medical college, Washington, D. C., and Carlisle Barracks, Pa., for several months training. Requests for information should be addressed to the adjutant general, U. S. Army, Washington, D. C.

Qualified Candidates for the Navy

Among the 230 senior medical students at class A medical schools who took the examination for appointment in the navy in January, 117 were found professionally qualified. There will be about fifty vacancies in the corps, July 1, and the first fifty qualified candidates on the list will be commissioned on graduation in June to fill the vacancies.

U. S. Public Health Service

Surg. Joseph Goldberger was directed, January 6, to proceed to Milledgeville, Ga., and return in connection with studies of nutrition being carried on by the public health service. Acting Asst. Surg. Charles F. Bolduan has been relieved from duty at Bremen, Germany, and assigned to Ellis Island, N. Y. Surg. Carroll Fox has been directed to proceed to such places as may be necessary in Brazil, Argentina, Paraguay, Uruguay, Chile, Peru and Ecuador in connection with matters relating to preventing the introduction of epidemic diseases into this country. Surg. (R) Oswald E. Denney has been ordered to active duty, effective, March 1, at marine hospital number 66, Carville, La. Asst. Surg. Gerald T. Sprague has been relieved from Fort Stanton, New Mexico, and assigned to duty at the relief station, San Diego, Calif. Surg. Walter L. Treadway has been directed to proceed to Warsaw, Poland, and other points in Europe where medical examinations of aliens are being conducted, when directed.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Feb. 11, 1928.

The Falling Birth Rate and the Tax-Paying Classes

This country can now be divided into two classes—those who pay taxes and derive no benefit from them except the usual ones, the preservation of order and the maintenance of our defenses, and those who, if they pay taxes at all, pay little and whose main concern is the advantages they can derive from the taxes paid by others. As a result of the socialistic trend of our legislation in recent years the burdens imposed on taxpayers have become too onerous for many worthy self-supporting citizens who cannot afford to bring up families. Their low birth rate causes concern to eugenists, who say that we are reproducing slowest from our best stock. In a joint letter to the *Times*, Major Leonard Darwin (president of the Eugenics Society), Prof. Elliot Smith and other eugenists argue that the allowance for children made in taxation should be increased. They refer to the fact that two distinguished American authors recently calculated that 1,000 college graduates will scarcely have 200 grown-up great grandsons, while 1,000 miners will have 3,700. We have no corresponding British figures and no past experience to guide us in this matter except perhaps the Roman empire at its climax. If this failure to reproduce took place, not only among those with a university training but also among all endowed with exceptional ability and energy, it would be a disaster. Income-tax payers, as a class, owe their position to the industry, forethought, self-control, and the intelligence of themselves and their ancestors. These qualities will tend to reappear in their descendants on account of both parental example and natural inheritance. Considerable sections of this class are not having families large enough to maintain their numbers. It is desirable that their fertility should be increased. With this object the signatories suggest an increase in the income-tax allowances for children. An increase in the fertility of the income-tax-paying classes can also be advocated on economic grounds; for the capital of a country consists not only in material things but also in the attainments of its citizens. Greater fertility among income-tax payers would result in an increased expenditure on education, with a consequent increase in the national capital, to the advantage of all classes. The present allowances for children are faulty: They are on a flat rate, with the result that they form such a small proportion of the total income of the well-to-do as to have no appreciable effect on their fertility. The larger the income, up to a point, the greater should be the allowances.

The Bicentenary of Hunter

The bicentenary of the birth of John Hunter, "the founder of scientific surgery," was celebrated at the Royal College of Surgeons by an exhibition of portraits and relics, the delivery of the Hunterian Oration by Sir Holburt Waring, and a dinner. Even at ordinary times the personality of Hunter pervades the college. His portrait by Reynolds hangs in the council room, and in the hunterian museum are his statue and thousands of his preparations. A selection of these was made for the bicentenary exhibition with such personal relics as his pocket scales and lancets. The famous skeleton of the Irish giant O'Brien, which Hunter took so much trouble to obtain, and whose lower bones are painted in the background of Reynolds' picture, was in evidence. In his oration Sir Holburt Waring described Hunter as the creator

of their museum and the patron saint of their college. Hunter formulated the idea that it was essential for the surgeon to have a minute knowledge of man in health and of the changes which occurred during the onset and course of disease. He did not hesitate to compare the structures and functions of man with those of the lower animals and even with those of plants. Since Hunter's day surgical technic had reached a high stage of perfection. Sir Holburt did not think that such great progress could be expected in the future. In his opinion the main advances will be along biochemical and biophysical lines, as regards both diagnosis and treatment.

Dermatitis from Hair Dye: Failure of Action for Damages

The danger of producing dermatitis from the use of paraphenylendiamine as a hair dye is now well known. In the following case a woman failed to recover damages from the hairdresser. He used a dye containing 30 per cent of paraphenylendiamine but exhibited a notice disclaiming liability for any ill effects, which he said occurred in about 2 per thousand persons. "As it is impossible to know these few without a test, we are willing to give this free trial on the customer's own responsibility." The woman wanted her hair dyed blue-black like that of a friend who had recently been so treated and was given the preliminary test. The dye was applied to a patch behind the ear of the size of a sixpence. The result was described as dermatitis of the scalp, inflammation of the ear, neck and chest, swelling of the eyelid, insomnia, and shock. She denied that she saw any notice. The judge left it to the jurors to say whether she had received adequate warning of the risk. If she had, they should find a verdict for the defendant. This they did.

New Medical Regulations for British Settlers for Canada

The new regulations for prospective British settlers in Canada are causing some concern in this country. Formerly the medical examination was performed by a roster of British physicians. In future it will be performed by Canadian physicians in this country, and some fear that this will have a restrictive effect. However, an official of the Canadian emigration department states that, so far from wishing to restrict the entry of British emigrants, the desire of the authorities is to obtain more. The object of the new regulations is to enable the final examination to take place in this country rather than in Canada. Owing to the rule of the Canadian authorities that every emigrant must be finally passed by a Canadian physician, it was formerly necessary to have two medical examinations—one in this country by a British physician and the other in Canada by a Canadian one. Under the new scheme, examination in the dominion will not be necessary unless the emigrant has withheld information with regard to his health or has been exposed to infection during the voyage across the Atlantic. It is hoped that the new scheme will save the emigrant expense. The fee charged by the British physician has been $2.50 for medical examination of an adult and often over $5 for a family. No charge will be made by the Canadian physicians. Centers for examination have been arranged so that the railway and other expenses incurred by would-be emigrants will in no case amount to more than the $2.50 fee formerly charged, and in the majority of cases the expenses will be less. No reflection is cast on the British profession, but for years it has been urged that the final examination should take place in this country rather than in Canada, thus saving emigrants from being rejected after crossing the Atlantic. No friction has arisen with the British medical authorities. However, organizations in this country concerned with emigration to Canada have misgivings. The emigration department of the Salvation Army complains that the Canadian authorities are now insisting on intending emigrants going through all the routine of a civil examination before the medical one. It would have been simpler to ascertain first if the applicant was physically fit and then deal with other matters. Complaints have also been made as to the slowness of the procedure.

Chemical Warfare on Civilians

The effectiveness of poison gas discharged from aircraft over cities was discussed in a lecture at the Royal United Service Institution by Major Victor Lefebure. He said that the combined effect of aircraft and poison gas was a horrible subject and constituted the most powerful argument for restricting chemical warfare. The conditions under which chemical warfare became most deadly were simple: a stationary dense objective with a sure method of applying adequate concentration of the lethal chemical. It was largely the absence of these conditions in the war which prevented the decisive results which might have been expected. But cities gave the possibility of the maximum efficiency. Dr. Owen of the air ministry has shown that the total weight of solid particles in a London fog is about 1 pound per million cubic yards. This is higher than the effective concentration of gas war chemicals, particularly the new arsenic compounds. Assuming that such compounds dropped from aircraft would not dissipate into a layer more than 100 yards high, a very fair assumption for large cities, less than a quarter of a ton of chemical would be adequate to cover a square mile. If they allowed such a high factor as 100 to provide for the barriers which would prevent uniform concentration in the heart of the city, they would see the ease with which a surprise air attack or a large attack in which even 90 per cent of the airplanes were brought down could induce chaos and terror.

Major J. D. Pratt, chief superintendent of the chemical warfare research department, said that the figures quoted as to gas attack from the air might be misleading, as such small quantities would produce only temporary incapacity from which a person would soon recover, and even then there must be exposure for a certain length of time. The atmosphere was never still, so that the gas would be gradually drifted away and with people indoors it might drift down a street without any casualties. The lecturer in reply said that he had purposely stated quantities of chemical in excess of that needed under ideal conditions to allow for the contingencies mentioned by Major Pratt.

PARIS

(From Our Regular Correspondent)

Feb. 8, 1928.

Diminution of the Alcohol Consumption in France

Recent statistics show that the alcohol consumption of France has diminished by one half, over a space of thirty years. In 1898 the total consumption, expressed in the form of absolute alcohol, was 1,800,000 hectoliters, which was the highest point ever reached. In 1913 the total had been reduced to 1,558,000 hectoliters, or a decrease of 242,000 hectoliters. Ten years later, after the war, the total in 1923 was only 1,035,000 hectoliters, which marks a decline in consumption of 765,000 hectoliters. In dividing these figures by the total population, it will be noted that the average individual consumption has dropped from 4.70 liters per person in 1898 to 3.96 liters in 1913, 2.67 liters in 1923, and 2.53 liters in 1926. A comparison of the individual consumption in 1898 with that of 1926 shows a decrease of 2.17 liters, or 46 per cent. This is a result over which all will rejoice who have been interested in combating by every means possible the incidence of alcoholism in France. The figures given thus far represent averages, and one notes wide

differences in comparing the average individual consumption in the various departments of France. In Calvados the annual individual consumption is still 8 liters of pure alcohol; in Orne, 6.10 liters; in Seine, 5.20 liters; in Eure, 4.80 liters; in Cantal, 0.40 liter; in Hautes-Alpes, Basses-Alpes and Vendée, 0.30 liter; in Creuse, 0.20 liter, and in Lozère (the lowest figure) it is 0.07 liter. In six departments the individual annual consumption of alcohol exceeds 4 liters of pure alcohol, and in thirty-three departments it does not reach a liter. The low consumption in so many departments is due, in great part, to the energetic antialcohol campaign staged and waged by the physicians, but is influenced also, possibly to an even greater extent, by the present heavy internal tax on alcoholic beverages.

The Senatorial Inquiry on the Management of the Insane

The numerous laws bearing on the insane are in a constant state of flux, for the occasions for finding them either too rigorous or too lax are many. In support of the contention that they are too severe, instances of arbitary commitments by the maneuvers of interested parties are cited. As evidence for the belief that they are too lenient, cases are mentioned (and, unfortunately, they are much more frequent and more certain) of insane persons who are dismissed too soon, under legal conditions, however, and who commit, later, crimes and misdemeanors for which they cannot be held accountable, and for which their victims cannot make claim for damages. Dr. Toulouse, who established in Paris the dispensary of prophylactic mental hygiene, which has become the Hôpital Henri Rousselle, has been summoned to give his opinion before the senate commission that is engaged in revising the text of the laws pertaining to the insane. Dr. Toulouse recommended, very naturally, his system of placing under observation for a week by specialists all persons arrested for misdemeanors who are alleged to be mentally ill. Following the reception of the report of the psychiatrists, the individual will either be sent to prison as being fully responsible for his acts, or will be sent to a psychopathic hospital to be treated, where he will be subjected to a prolonged observation in the section termed "open," in which he will be placed under treatment. Internment in the section of the hospital termed "closed" will be determined on by a board of expert psychiatrists designated by the court from a list of specialists who are appointed following a rigid scientific competitive examination. The decision of this board will be final; not even the courts can take an appeal from it. This is the essentially new feature of the law, for heretofore the magistrates who yielded, unconsciously, to influences brought to bear on them had the right to liberate any inmate of a psychopathic institution, as they deemed best, and no account was taken of the opinion of experts unless they so ordered.

The Creation of New Anticancer Centers

A new anticancer center has been opened in the Charonne section as a result of the initiative of the Ligue franco-américaine contre le cancer. This will be more particularly a school center for women nurses. An organization of this kind was already established at the Hôpital Tenon, in the service of Dr. Proust. As with this, the new center is devoted to the instruction of nurses; visiting women so called; women superintendents of hygiene training for mission work in factories, and the volunteers who render kindly aid to the various organizations for the promotion of hygiene and public charity. Instruction is given how to detect cancer in the early stages by pointing out the first signs that are likely to attract attention, in order that the patient, who is often still ignorant of his disease, may be directed to institutions where he can be treated—by radium or by surgery—at a stage in the development of the cancer when he still has chances of recovering. The idea is spread among the public that cancer is often curable if treated in time. The Charonne Center comprises, in addition to the lecture hall, a dispensary for cancer patients, in order that specimens may be available to show to the pupils, and also a few beds for patients who receive applications of radium or who undergo, under local anesthesia, minor removal operations.

A new anticancer center was likewise recently dedicated at Marseilles. It has a surgical service, a deep roentgen-ray service, and a radium service. It is provided with two research laboratories, the Pavillon Bergonié and the Pavillon Curie.

Deaths

The death of Prof. Félix Henneguy has been announced. He was vice president of the Academy of Sciences, member of the Academy of Medicine, and had had a brilliant career as a biologist. He had succeeded Balbiani to the chair of comparative embryogeny in the Collège de France. His researches brought forth some important practical conclusions in connection with fish culture. He founded, in collaboration with Ranvier, the *Archives d'anatomie microscopique*. He was an officer of the Legion of Honor.

Prof. Xavier Armozan, occupant of a professorial chair in therapeutics and chemistry at the Faculté de médecine de Bordeaux, has died at the age of 76. He was one of the best known clinicians of the provinces. He was associate member of the Academy of Medicine. He published several treatises regarded as classics.

MADRID

(From Our Regular Correspondent)

Jan. 15, 1928.

Immunity

Dr. Bordet of Brussels recently lectured on immunity before the Academy of Medicine. The discovery of the specificity of antibodies has been extended from the immunologic to the biologic field. Different species may be distinguished only by their chemical structure. Among individuals belonging to the same species, subtler differences may exist. It is generally agreed that antigens are proteins. The character of such proteins would then serve to identify diverse species. However, this conception must be extended, as Bordet and Renaux have found that animal species are characterized by their lipoids as well as by their proteins.

Undulant Fever

Recently Dr. M. Tapia, the director of the epidemic hospital, lectured on Malta fever at the Madrid medical school. Tapia takes issue with Marañón's view that the goat is essential for the presence of the condition in man. In Rhodesia in 1922 an epidemic coincided with an abortion epizootic in sheep. In Tapia's hospital a recent patient had never taken goat's milk nor been near goats, but took care of a cow stable.

No part of Spain is now free from the disease, which used to be confined to the southern and eastern parts of the country. Ramón y Cajal saw cases in Aragón during the annual migration of goats, and García Izcara has found foci of contagious abortion in Madrid. The relation of human cases with a bovine or porcine origin is less evident than in the case of caprine infection. Tapia disagrees with the British commission as to the simplicity of diagnosis and the specificity of the agglutination. Nicolle saw typhus patients who agglutinated *Micrococcus melitensis*, and Tapia had a patient with typhoid whose serum agglutinated *M. melitensis* at 1:1,000. The technic must be revised to exclude paraspecific agglutination. Diagnostic limits of agglutination vary a great deal, and even 1:10 and 1:5 values may have

some significance. In synovitis and arthritis cases the organism was isolated from the serous fluid and not from the blood. The intradermal test advised by Durán de Cottes has been found valuable. Statements as to a low death rate in undulant fever must be discounted, especially in rural districts.

Neurovaccine in Smallpox

Dr. E. Gallardo of the Alphonse XIII Hygiene Institute lectured recently on the use of Levaditi's neurovaccine in Spain. This product is still but little employed, perhaps because of difficulties in preparation and its selective action on the nervous system. However, it may render great service, especially in tropical climates. Gallardo has shown that it is easy to prepare, while the best proof of its safety lies in the many vaccinations performed in Spain without any mishap. Gallardo then described the method of preparation. Any normally potent skin virus can be grown in rabbit's brain without previous passage through the testis, as advised by Noguchi. Two sterilization methods are used: ether or centrifugalization. After subdural inoculation in the rabbit, cerebral sections are taken and following sterility tests are placed in sterile glycerol and saline solution for ten or twelve days. These preserved specimens are the ones used for vaccination.

Only in malnourished children or when the mother is careless do sores develop. During the last four years the institute has furnished provincial inspectors with more than 2,500,000 doses of this vaccine, and thousands of vaccinations have been performed in southern Spain and the Canary Islands. All physicians seem satisfied with the results, and former complaints as to impotence of the vaccine in summer have ceased.

Gallardo has studied 20,365 vaccinations and revaccinations with this vaccine. Takes reached 91.05 per cent in primary vaccinations and 58.60 per cent in revaccinations. The provincial health inspector at Cáceres, after an intensive vaccination campaign, studied the result in 227,000 cases. Takes amounted to 90 per cent in primary vaccinations and 50 per cent in revaccinations.

Temporary Closing of a Famous Hospital

One of the most famous Spanish institutions is El Niño Jesús Hospital, founded by the Duchess of Santoña in 1877 for the treatment of indigent children. Throughout its long existence this meritorious hospital has received outside help only twice: once a premier granted a subsidy; another time a lady left it a legacy of 200,000 pesetas (about $34,000). The increasing cost of living has borne heavily on the institution, and when the provincial charities board discontinued the free dispensaries it supported there, 166 of the 250 inmates had to be discharged and eventually the hospital had to close its doors. This event threw some light on existing precarious conditions. The physician in chief received a salary of 3,000 pesetas ($500) a year, staff physicians $170 and junior physicians $85, while nurses were paid only about $2 a month. After a few months, when some of its endowment income accumulated, the hospital opened again, to the great consolation of poor mothers all over Spain.

Prognosis in Typhoid

Dr. Zarco Bohorques of the Madrid Infectious Disease Hospital gave a lecture on capillaroscopy in the prognosis of typhoid. His attention was called to the fact that in the necropsy service of the hospital the number of cases in which the cause of death could not be accurately explained far exceeded the rest of the group. In almost 75 per cent the cause was listed under the vague term of vasomotor paralysis. The clinical expression in life fitted in with what Hutinel called malignant syndrome, a condition which seems an actual fact but lacks definite details. Zarco then thought of using capillary examination as a means of foretelling the course of typhoid. Vasomotor paralysis stands out among causes of death in the disease. Death takes place about the end of the second week, and the only anatomic signs other than enlargement of peripheral capillaries are enlargement of the intestinal lymphatic system, scattered follicles and Peyer's patches. The terminal syndrome may develop either suddenly or gradually. None of the component symptoms has any identifying value, save when it is too late. On the other hand, the enlargement of the peripheral capillaries, while not pathognomonic, is the best available sign to demonstrate the presence of the so-called malignant syndrome. Dr. Zarco believes that the toxin of the typhoid bacillus acts directly on the capillary vessels.

RIO DE JANEIRO

(From Our Regular Correspondent)

Feb. 15, 1928.

Streptothrix Leproides in Leprosy

Drs. J. M. Gomes and D. do Pateo, Jr., have reported to the São Paulo Biologic and Health Society their further work on complement fixation with defatted *Streptothrix leproides* in leprosy. This test, while valuable for diagnostic purposes, has still more significance in prognosis and treatment. In recent cases it demonstrates the existence of an infection before symptoms have appeared. A strong reaction invariably points to a serious condition, in which treatment will prove either ineffectual or harmful. A positive result may express the existence of immunity rather than latent infection. In early cases or *formes frustes* the test often proves negative.

Hemolytic Complement

Dr. E. Vaz has called attention, before the São Paulo Biologic and Health Society, to an uncommon source of error in titrating hemolytic serums. It consists in the presence of hemolysins in the guinea-pig against the sheep cells. The striking feature in his case was the large amount of hemolysins: 1 cc. of a 1:20 dilution completely hemolyzed 0.5 cc. of a 5 per cent cell suspension in ten minutes. Interference by heterologous antibodies was suspected, as the guinea-pigs had received typhoid-paratyphoid vaccine. This was disproved, however, when the phenomenon was repeated with serum from other guinea-pigs. The complementary unit was below the hemolytic dose. The use of a control tube is valuable, in order to detect a possible source of error.

Coagulation and Toxicity

Dr. L. de Assumpção of São Paulo has drawn from some experiments the following conclusions: There is a certain parallelism between the toxic power of *Lachesis lanceolatus* (bushmaster) venom and its coagulating power. There is no relation between the toxicity of *L. lanceolatus* venom and its neutralization by a specific serum. As demonstrated by Brazil and Vellard, the two titrating methods yield different results with venoms from different species of snakes. With *Crotalus terrificus* (rattlesnake) venom the anticoagulins in the plasma parallel the antitoxic power of the serum, but this does not apply to the venom of *L. lanceolatus.*

New Biologic Institute

Because of the importance assumed by biologic research in protecting the coffee industry, the State of São Paulo has created a biologic institute for plants and animals under the direction of Dr. A. Neiva. The following physicians have received appointments : Dr. H. Rocha Lima, chief of the animal division, and Drs. G. Pacheco, A. Fialho, P. Galvao and A. Hempel, assistant chiefs, respectively, of microbiology,

pathology, physiology and entomology and parasitology. The high standing of the appointees bears proof of the purpose of the authorities to make this institute a really scientific organization.

ITALY

(From Our Regular Correspondent)

Jan. 15, 1928.

Congress of Hydrology, Climatology and Physical Therapy

The Associazione medica italiana di idrologia, climatologia e terapia fisica held recently in Milan its eighteenth national congress. The congress was opened with an address by the chairman, Professor Devoto, in which he recalled the work of the association during forty years of activity spent in developing the natural therapeutic resources of Italy. An address by Professor Piccinini followed in which he announced the outcome of the prize contest held by the association on the subject "The Historical Evidence and the Actual Remains of Roman Thermal Baths in Italy." The winner was Dr. Botto-Micca of Turin.

THE MECHANISM OF THE ACTION OF MINERAL BATHS

Speaking on the first main topic, "The Mechanism of the Action of Mineral Baths," Professor Valenti of Milan explained the various theories proposed to account for the therapeutic effects of mineral baths (the theory of absorption, of contact, of radioactivity; the electric theory, the chemico-physical theory, and others). The mechanism of the action of mineral baths is complex, being due to multiple factors.

THE SOJOURN OF TUBERCULOUS PERSONS IN CLIMATIC RESORTS

The second main topic on the program, "The Sojourn of Tuberculous Persons in Climatic Resorts," was discussed by Professor Da Gradi and Dr. Silvano. They affirmed the principle of the harmlessness to guests and inhabitants of climatic resorts of tuberculous persons hospitalized in sanatoriums, provided the sanatoriums are properly organized and the patients are given hygienic instruction. The assembly instructed the management of the association to take steps to have a law passed that would provide rigorous supervision of the treatment of tuberculous persons in care-taking institutions, with a view to protecting them and the healthy persons who reside in the same locality. As the place of meeting for the next congress, Campi Flegrei (near Naples) was chosen.

Following the congress of Milan, Professor Devoto convened a special session for the discussion of problems of nutrition.

Dedication of the Minich School

As a branch of the Ospedale Civile of Venice, there has been established the Scuola pratica di medicina e chirurgia, the funds for which were furnished by the Prof. A. Minich Foundation. The dedicatory address was delivered by Professor Vitali on the subject "De praesagenda vita et morte aegrotantium," which is the title of the work by Prospero Alpino (1601). Professor Vitali emphasized the importance of prognosis with respect to the patient and his family, and recalled that Hippocrates was the first physician of antiquity who had made prognoses. The speaker then discussed the various morphologic types and the studies on the individual constitution, which is so important for the prognosis.

Prof. Vittorio Ascoli Honored

In the quarters of the *Policlinico* in Rome, Prof. Vittorio Ascoli, director of the Clinica Medica, was the guest of honor at recent ceremonies held in celebration of his completion of the tenth year of instruction at the University of Rome. Professor Ascoli gave a summary of the work that he had done, during the ten years, in organizing the institute. Speaking then of the scientific trend of his school, he stated that, while recognizing the great importance of the study of the constitution, there is no need of neglecting the significance of extrinsic pathogenic causes, just as, along with the consideration of hormones and nerve relations, pathologic anatomy still maintains all its significance. Therefore, a thorough study of the patient must begin with researches on the individuality of the subject, and must be based on anamnestic observations and on the physical and functional examination of the patient, completed by biologic researches.

A Contest in Food Hygiene

In connection with the Milan Exposition, the Società italiana d'igiene has announced a contest in which those who have on display food substances, apparatus or instruments for preparing foods, methods of preserving foods, and the like, are called on to participate. The contest will cover twelve distinct sections, as follows: (1) The hygiene of milk and milk diets; the hygiene of the cow stable; (2) the selection and preservation of eggs; (3) the hygiene of meat; (4) the hygiene of the bread industry, pastry and sweetmeats; (5) the hygiene of the preparation of wine and its derivatives; (6) mineral waters; (7) food oils; (8) tea, coffee, chocolate and similar beverages; (9) the cultivation and preservation of fruits and vegetables; (10) food hygiene and food therapy; (11) the hygiene of the kitchen; dish-washing apparatus; other time-saving utensils, and (12) disinfestation of the orchard, fruit garden, stable, poultry house, and the like.

BERLIN

(From Our Regular Correspondent)

Feb. 11, 1928.

Combined Treatment of Malignant Diphtheria with Diphtheria Antitoxin and Streptococcus Antitoxin

During the past two years in Berlin there has been an increase in the number of diphtheria cases and in the number of cases that have terminated fatally. Researches have shown that in half of the observed malignant cases highly virulent streptococci are present not only in the pharyngeal membrane but also in the blood. In the municipal hospital both diphtheria serum and streptococcus antitoxin have, of late, been injected. Before the Berliner Medizinische Gesellschaft, Professors Finkelstein and Fritz Meyer recently reported the results of such treatment. Meyer expressed himself as follows: Bacteriologic researches on malignant (toxic, septic) pharyngeal diphtheria reveal, in 50 per cent of all cases, hemolytic streptococci in large quantities. In such researches both the Löffler serum and the blood plates should be taken into account. The streptococci form a poison that, at the site of entrance, sets up changes similar to those produced by the diphtheria toxin (necroses, marked cellulofibrous inflammation), causes severe changes in the heart muscle and in the liver, and leads to exceedingly severe anemias. The genuine streptococcus toxin has the capacity of forming antitoxin, which can be biologically tested as to its efficacy and potency. This tested streptococcus antitoxin should be injected in all cases of malignant diphtheria along with large doses of diphtheria antitoxin, as it is harmless in all cases and in the cases with streptococcus involvement (about 50 per cent) it is needed for a cure. According to the report of Professor Finkelstein, of the forty-nine toxic cases in which the method cited was not employed, forty-three (children), or 88 per cent, terminated fatally, while, of the forty-seven cases in which the combined treatment was used, only twenty-eight, or 60 per cent, resulted in death. A portion of the children treated were admitted in a hopeless condition and

died within twelve to thirty-six hours. According to his observations, the application of the streptococcus antitoxin in combination with the diphtheria serum deserves to be tested further. The combined treatment is indicated only for the toxic cases; in the nontoxic cases, only the diphtheria serum should be employed, as it is effective in the present epidemic as well. Finkelstein bases the diagnosis "toxic diphtheria" more particularly on the presence of a "white" or "lymphatic" edema about the swollen glands of the neck as a sign of toxic capillary injury, and on the more marked albuminuria, as a sign of nephrosis. Both are early manifestations. The extent of the pharyngeal membrane is not conclusive, as toxic diphtheria may be associated with a slight local membrane formation, while the nontoxic type may present an extensive formation. More important is the discolored appearance and the fetor, which is absent in the nontoxic type. Finkelstein applied the method in all toxic cases, without waiting for the bacteriologic report; that is to say, also in the cases in which no streptococcus was involved. The dosage ranged between 25 and 75 cc. In the type of toxic diphtheria associated with hemorrhagic diathesis, in which the prognosis is especially bad, the combined treatment did not appear to give better results than treatment with the diphtheria antitoxin alone. The late paralysis, which is evidently of purely diphtherial origin, is not prevented, nor the respiratory paralysis. From the last mentioned involvement Finkelstein lost a number of children (as late as from the seventh to the eleventh week) who had passed fortunately through the acute stage and also severe circulatory disturbances. In view of such late deaths, a cure was not recorded in the statistics until the eighth week had passed without the appearance of threatening nerve symptoms.

In the discussion on the two reports mentioned (which are published in No. 6 of the *Deutsche medizinische Wochenschrift*), Professor Friedemann, of the department of infectious diseases of the Rudolf Virchow Hospital, expressed his disapproval of the combined treatment, as he had failed to see any good effects resulting from it. Prof. G. Klemperer of the Moabit Hospital, on the other hand, evidenced his warm support of the method. Dr. Werner Schultz of the Westend Hospital and Professor Braun of the Friedrichshain Hospital admitted that they had not observed any good results of the method, though Braun did not take an opposing attitude. Professor Jürgens of the Urban Hospital, as well as the other physicians who discussed the method—for example, the hygienist Prof. Martin Hahn and the social hygienist Professor Gottstein—were ardently in favor of using diphtheria serum as early as possible if there is clinical evidence for the diagnosis, before the diagnosis has been confirmed by the bacteriologic examination, for it is an established fact that mortality from diphtheria is lower, the earlier the serum is employed. The danger from hypersensitiveness — the appearance of serum sickness when the injections are repeated —is very slight, and will be still less if the albumin is removed from the serum, which has become feasible through recent methods of preparation. Professor Gottstein pointed out that only the clinician has the right to decide whether a remedy is effective or not, and that, for this reason, the figures presented by Professor Friedberger to the alleged effect that the mortality was already on the wane before the diphtheria serum was introduced and that no influence on the mortality was to be observed from the application of the serum, cannot be regarded as conclusive. Whatever attitude is taken, whether the fluctuations in the number of diphtheria cases are due to the mode of treatment employed or to the introduction of social-hygienic measures, the main thing is that diphtheria patients shall be brought to the hospitals as soon as possible, for there the therapeutic and care-taking measures can be carried out better than in the homes of the patients.

Marriages

EDWARD ANTHONY MLADICK, Melrose Park, Ill., to Miss Gladys Jayne Castans of Chicago, February 18.

WILLIAM P. DUNCAN, JR., Tampa, Fla., to Miss Louise Van Dyke of Atlanta, Dec. 23, 1927.

JAMES HORACE CHISM, Carthage, Tenn., to Mrs. Frances Woosley of Nashville, Dec. 28, 1927.

HENRY P. LEDFORD to Miss Myrtle Hirschi, both of Wichita Falls, Texas, March 6.

ISAAC SKIR to Miss Jane Langer, both of Brooklyn, February 26.

Deaths

William Warren Townsend ✠ Burlington, Vt.; University of Vermont College of Medicine, Burlington, 1893; professor of genito-urinary diseases at his alma mater; past president of the Vermont State Medical Society; member of the New England Surgical Society, the American Association of Genito-Urinary Surgeons and the American Urological Association; served during the World War; attending genito-urinary surgeon to the Mary Fletcher Hospital, Fanny Allen Hospital, and the Bishop De Goesbriand Hospital, Burlington, consulting genito-urinary surgeon to the Rutland City (Vt.) Hospital, the Proctor (Vt.) Hospital and the Champlain Valley Hospital, Plattsburgh; aged 57; died, February 20, of cerebral hemorrhage.

Edwin Gilman Goodrich, Los Angeles; University of Southern California College of Medicine, Los Angeles, 1903; member of the California Medical Association; assistant professor of emergency surgery, College of Medical Evangelists; police surgeon to the Los Angeles Receiving Hospital; president of the National Association of Police and Fire Surgeons; aged 60; died, February 6, of heart disease.

Clyde Ellsworth Ford ✠ Cleveland; Cleveland College of Physicians and Surgeons, Medical Department Ohio Wesleyan University, 1902; formerly instructor of surgery at his alma mater; past president and director of the American Association of Industrial Physicians and Surgeons; city health officer, 1910-1916; at one time secretary of the state board of health; aged 53; died, February 19, of heart disease.

Joseph Borland Sayles ✠ Taunton, Mass.; Bellevue Hospital Medical College, New York, 1888; Dartmouth Medical School, Hanover, N. H., 1888; member of the New England Dermatological Society; served during the World War; formerly on the staff of the Morton Hospital; aged 62; died, February 21, at the Truesdale Hospital, Fall River, of heart disease.

Samuel S. Gaulden, Quitman, Ga.; University of Maryland School of Medicine, Baltimore, 1886; past president of the Brooks County Medical Society; at one time president of the state board of medical examiners; formerly member of the state legislature and member of the local school board; aged 68; died, February 7, of nephritis and cerebral hemorrhage.

John McQuaid Thompson, Nashville, Tenn.; Harvard University Medical School, Boston, 1889; member of the American Psychiatric Association; connected with the U. S. Veterans' Bureau; aged 65; died, Oct. 29, 1927, at the Protestant Hospital, of endarteritis obliterans and myocarditis.

Israel Brown ✠ Norfolk, Va.; Medical College of the State of South Carolina, Charleston, 1894; for two years member of the state legislature; served during the World War; for many years on the staff of St. Vincent's Hospital; aged 54; died, February 10, at Charlottesville, of heart disease.

Horace Kendall Foster ✠ Peabody, Mass.; Dartmouth Medical School, Hanover, N. H., 1882; for many years city physician; formerly president of the board of trustees and on the staff of the Josiah B. Thomas Hospital; aged 73; died, February 20, of carcinoma of the stomach.

Kinch Collins Knolle ✠ Brenham, Texas; Medical Department of the Tulane University of Louisiana, New Orleans, 1909; past president and secretary of the Washington County Medical Society; served during the World War; aged 42; died, February 18, of angina pectoris.

Alfred Bernard Camille De Passe ✠ Forest Hills, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1911; on the staffs of the Jamaica Hospital, Richmond Hill, Mary Immaculate Hospital, Jamaica and the New York Polyclinic Medical School and Hospital, New York; aged 37; died, February 19.

Charles J. Saunders ✠ Fort Dodge, Iowa; State University of Iowa College of Medicine, Iowa City, 1885; member of the Radiological Society of North America; past president of the Iowa State Medical Society; formerly on the staff of St. Joseph Mercy Hospital, where he died, February 18, aged 65, of lympathic leukemia.

William Stout, Larned, Kan.; St. Louis College of Physicians and Surgeons, 1908; member of the Kansas Medical Society; superintendent of the Larned State Hospital; aged 42; died, February 19, of a fracture of the cervical vertebrae received when the automobile in which he was overturned.

Melvin Lazelle Moore ✠ Los Angeles; Rush Medical College, Chicago, 1880; Bellevue Hospital Medical College, New York, 1882; formerly professor of obstetrics, University of California Medical School, Berkeley; aged 68; died, February 25, of heart disease.

Walter Lathrop ✠ Hazleton, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1890; medical superintendent of the Hazleton State Hospital, where he died, February 9, of septic laryngitis and cerebral thrombosis, aged 59.

Samuel B. Arment, Bloomsburg, Pa.; Jefferson Medical College of Philadelphia, 1877; member of the Medical Society of the State of Pennsylvania; formerly on the staff of the Bloomsburg Hospital; aged 75; died in February, of heart disease.

Charles Sargent Underhill, Ogunquit, Maine; College of Physicians and Surgeons, Boston, 1912; member of the Maine Medical Association; aged 38; died, Oct. 8, 1927, at St. Barnabas Hospital, Portland, following an operation for hernia.

James Thompson Rea, Chicago; Milwaukee Medical College, 1908; member of the Illinois State Medical Society; aged 64; died, February 23, of septicemia, following an infected wound of the finger, accidentally self-inflicted.

Harry R. Simmons, Corinth, Ky.; Kentucky School of Medicine, Louisville, 1893; member of the Kentucky State Medical Association; also a druggist; aged 61; died, February 10, of arteriosclerosis and softening of the brain.

Frank Turner, Heyworth, Ill.; Rush Medical College, Chicago, 1893; member of the Illinois State Medical Society; aged 59; was instantly killed, February 19, when the automobile in which he was driving was struck by a train.

John Lynnville Puckett, Kokomo, Ind.; Medical College of Indiana, Indianapolis, 1879; member of the Indiana State Medical Association; Civil War veteran; formerly mayor of Kokomo; aged 81; died, February 22, of paralysis.

John Russell Eastman, Chicago; Rush Medical College, Chicago, 1893; served during the World War; connected with the U. S. Veterans' Bureau; aged 59; died suddenly, March 1, at his home in Evanston, of heart disease.

Walter Lesesne Anders ✠ Tulsa, Okla.; University of Pennsylvania School of Medicine, Philadelphia, 1919; formerly on the staff of St. John's Hospital; aged 42; died, Dec. 29, 1927, in a sanatorium at Guthrie.

Marcus Miller Carr ✠ Dallas, Texas; Southern Methodist University Medical Department, Dallas, 1914; served during the World War; aged 39; died, February 20, in the Barnes Hospital, St. Louis, of carcinoma.

James Myron Young ✠ Cedar Rapids, Iowa; State University of Iowa College of Medicine, Iowa City, 1903; aged 52; died, February 21, of cerebral embolism, following an operation for strangulated hemorrhoids.

William E. Glosser ✠ Williamsport, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1893; for many years on the staff of the Williamsport Hospital; aged 59; died, February 13.

John Edgar Bercaw ✠ Okmulgee, Okla.; Starling Medical College, Columbus, Ohio, 1902; member of the Radiological Society of North America; aged 47; died, February 13, of carcinoma of the thyroid.

Joseph Hall, Bay Minette, Ala.; University of Alabama School of Medicine, Tuscaloosa, 1901; member of the Medical Association of the State of Alabama; aged 59; died, February 2, of angina pectoris.

Nathan M. Baker, Spokane, Wash.; University of Pennsylvania School of Medicine, Philadelphia, 1889; formerly on the staff of the Deaconess Hospital; aged 68; died, January 2, of cardiovascular disease.

Ivy Pease Tash, Fairfield, Maine; Medical Department of the University of the City of New York, 1879; member of the Maine Medical Association; aged 79; died suddenly, Dec 17, 1927, of heart disease.

Noah Webster Clark, Rossville, Ind.; Medical College of Indiana, Indianapolis, 1904; member of the Indiana State Medical Association; aged 57; died suddenly, February 24, of heart disease.

Henry Arthur Griffin ✠ New York; Medical Department of Columbia College, New York, 1889; comptroller of the Barnard College; aged 63; died, February 23, of coronary thrombosis.

Barney E. Garrison ✠ Wayne City, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1881; past president of the Wayne County Medical Society; aged 68; died, February 18.

Charles Paget Duffy, Brooklyn; Bellevue Hospital Medical College, New York, 1882; aged 72; died, February 10, at St. Vincent's Hospital, New York, of hypertrophy of the prostate.

Hal C. Bell, Detroit; Detroit College of Medicine and Surgery, 1927; aged 26; died, January 17, in the Harper Hospital, of cerebral hemorrhage, probably due to brain tumor.

Messer Highfill, Marshfield, Mo.; Missouri Medical College, St. Louis, 1887; member of the Missouri State Medical Association; aged 69; died, January 28, of cerebral hemorrhage.

George William Goodale ✠ San Francisco; College of Physicians and Surgeons of San Francisco, 1900; aged 54; died, February 26, of chronic myocarditis and arteriosclerosis.

Roscoe Conkling Metzel ✠ Baltimore; University of Maryland School of Medicine, Baltimore, 1905; aged 48; died, February 29, of carcinoma of the kidney with metastasis.

Stephen Hanford Hankinson, Augusta, Ga.; University of Georgia Medical Department, Augusta, 1900; aged 50; died, February 11, of cerebral hemorrhage and arteriosclerosis.

George H. Jones ✠ Lutcher, La.; Medical Department of the Tulane University of Louisiana, New Orleans, 1891; aged 66; died, Dec. 18, 1927, of cerebral hemorrhage.

Abner Lewis Davis, Findlay, Ohio; Pulte Medical College, Cincinnati, 1877; aged 77; died, January 24, at the Home and Hospital of the City of Findlay, of diabetes mellitus.

K. W. King, Salado, Ark. (licensed, Arkansas, 1903); member of the Arkansas Medical Society; aged 48; died, January 31, at Searcy, of carcinoma of the liver.

Mary B. Jewett, Florence Villa, Fla.; Woman's Medical College of the New York Infirmary for Women and Children, 1895; aged 69; died, February 5, of carcinoma.

William Erastus Mabry, St. Petersburg, Fla.; Missouri Medical College, St. Louis, 1875; Civil War veteran; aged 82; died, February 12, of chronic myocarditis.

Charles James Watson, Jr. ✠ Philadelphia; Jefferson Medical College of Philadelphia, 1916; aged 36; died, February 9, of burns received when his bed caught fire.

James A. Mitchell, Ursa, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1881; aged 73; died, February 14, of carcinoma of the lung and sacrum.

Burleigh C. Kellam, Norfolk, Va.; College of Physicians and Surgeons, Baltimore, 1884; aged 65; died, February 4, of acute dilatation of the heart.

Kyle Patrick Elam, Persia, Tenn.; Lincoln Memorial University Medical Department, Knoxville, 1906; aged 63; died, January 29, of tuberculosis.

Lewis C. Griffith, Bowling Green, Ind. (licensed, Indiana, 1897); aged 79; died, February 19, at the Community Hospital, Brazil, of pneumonia.

Alvin M. Wallingford, Flemingsburg, Ky.; Jefferson Medical College of Philadelphia, 1865; aged 86; died, February 15, of cerebral hemorrhage.

Pratt P. Ferguson, Blytheville, Ark.; Barnes Medical College, St. Louis, 1895; aged 58; died, January 31, at New York, of paralysis.

Francis Morris Broach, Ansley, Ala.; Southern Medical College, Atlanta, 1890; aged 72; died, February 6, of erysipelas.

Bureau of Investigation

MORE MISBRANDED NOSTRUMS

Abstracts of Notices of Judgment Issued by the Food, Drug and Insecticide Administration of the United States Department of Agriculture

Pildoras Ovaricura.—The Flar Medicine Company at Coamo, Porto Rico, sold a quantity of "Pildoras Ovaricura," which the federal authorities declared was misbranded. When analyzed, these pills were found to contain iron sulphate and plant material, including aconite, aloe, ginger and cinnamon. The preparation was sold under the false and fraudulent claim that it would cure diseases peculiar to women. In June, 1927, judgment of condemnation and forfeiture was entered, and the court ordered that the product be destroyed.—[*Notice of Judgment 15315; issued February, 1928.*]

Cerebrotono.—A quantity of "Cerebrotono" was sold and offered for sale in Porto Rico by the Flar Medicine Company of Coamo. The government charged that the preparation was misbranded. When analyzed by the federal chemists, Cerebrotono was found to contain calcium, sodium, potassium and iron glycerophosphates, with plant extractives, alcohol and water. The stuff was found to contain over 10 per cent of alcohol but the label failed to bear any statement of that fact. Furthermore, Cerebrotono was falsely and fraudulently sold as a sure and efficient tonic reconstructive of the brain and nerves, being especially recommended for general debility and sexual weakness. In June, 1927, judgment of condemnation and forfeiture was entered, and the court ordered that the product be destroyed.—[*Notice of Judgment 15315; issued February, 1928.*]

Pildoras Ferrogenas.—These pills were sold and offered for sale by the Flar Medicine Company of Coamo, Porto Rico, and the federal authorities charged that they were misbranded. When analyzed, "Pildoras Ferrogenas" were found to contain iron and potassium carbonate and sulphate comparable to Blaud's pills. The claims made for these pills were false and fraudulent, and in June, 1927, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment 15315; issued February, 1928.*]

Zovia.—The Zovia Wonder Water Company in January, 1927, shipped from Alhambra, California, to the State of Washington a quantity of "Zovia," a so-called concentrated mineral water. Analysis by the federal chemists showed the article to be essentially a solution of Epsom salt in water. The product was described as a "Food—Not a Medicine" and was said to be "composed of mineral salts essential to all human and animal life, scientifically compounded in such a way that the body extracts those minerals of which it is in need and discards those that are not needed." There were a number of other equally false and fraudulent claims, and in June, 1927, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed. —[*Notice of Judgment 15327; issued February, 1928.*]

Elixir Eneglotaria.—In February, 1927, it was charged that the Eneglotaria Medicine Company, Santurce, Porto Rico, was selling and offering for sale "Elixir Eneglotaria," which the federal authorities declared was misbranded. According to the federal chemists, this preparation consisted essentially of mercury and potassium iodides, sarsaparilla extract, alcohol and water. It was sold as a cure for "scrofula," eczema, rheumatism, chronic catarrh and syphilis. In June, 1927, the Eneglotaria Medicine Company, Inc., having admitted that the claims were false and fraudulent, judgment of condemnation and forfeiture was entered and the court ordered that the product be released to the company on payment of the costs and the execution of a bond, conditioned, in part, that the product be not sold or otherwise disposed of without first having been truthfully labeled.—[*Notice of Judgment 15328; issued February, 1928.*]

Jarabe de Guayaco Eneglotaria.—This preparation was being sold and offered for sale in February, 1927, by the Eneglotaria Medicine Company, Santurce, Porto Rico, and the federal authorities declared that the stuff was misbranded. When analyzed by the Bureau of Chemistry, "Jarabe de Guayaco Eneglotaria" was found to consist essentially of mercury and potassium iodides, guaiacol, sugar, alcohol and water. The claims made for the preparation were false and fraudulent, and in June, 1927, the Eneglotaria Medicine Company, having admitted this fact, judgment of condemnation and forfeiture was entered, and the court ordered that the product be released to the company on payment of the costs and the execution of a bond conditioned, in part, that the preparation be not sold or otherwise disposed of without first having been truthfully labeled.—[*Notice of Judgment 15328; issued February, 1928.*]

THE DANISH LOTTERY FRAUD

Poul Arendt Fishes for Easy American Dollars

Physicians in small towns through the Middle West, but not in the large cities, have recently received an "Invitation to a Trial of Fortune in the Danish Colonial Lottery." The "invitation" comes from a "Mr. Poul Arendt," who does business from Postoffice Box 529, Copenhagen, Denmark. Mr. Arendt's advertising matter might be plausible to those who are not familiar with the more high-powered and subtle

AUTHORISED LOTTERY OFFICE
Poul Ahrendt
SELLING OFFICE FOR THE DANISH COLONIAL LOTTERY
NORREBROGADE — POSTBOX 529 — COPENHAGEN N.
21,175
One Million Gold Francs
200.000 $ 100.000 $
State-guaranteed, therefore the greatest security.
27th February 1926

"get-rich-quick" gentlemen that we raise in our own country. But to those of us who have been circularized by realtors of vision, Texas oil-field agents and others of similar stripe, Mr. Arendt's circular must seem tame indeed. This melancholy Dane starts out thus:

"Dear Sir or Madam.—Do you wish to make big money? Would you like to be amongst the well-to-do who need only draw their interest from the bank? . . . Then make haste to join in the next series of our State-guaranteed lottery, and perhaps in a short time we can send you a cheque like the one in the picture. Is it not a fine feeling of comfort and security when the first couple of thousand dollars can be called your own? . . ."

And so on. Should you wish to take a flier, $16 of real American money will buy a whole ticket or $8 a half-ticket. Mr. Arendt declares, in black-faced type, that "Post office money orders will not be accepted by us." The reason given is that they "have to be converted into Danish currency, which causes great delay." Possibly. But a letter from the office of the Solicitor of the Post Office Department, Washington, D. C., U. S. A., written as late as February 2, 1928, states that under date of January 30, 1928, the Postmaster General issued a fraud order against Poul Arendt of Copenhagen, directing postmasters to return all mail addressed to said party with the word "Fraudulent" stamped thereon. The Postmaster General at the same time also directed all postmasters of the United States to issue no money orders payable to Poul Arendt.

However, Mr. Arendt is perfectly willing to accept United States currency, United States express orders, or United States bank drafts!

Correspondence

"PROPHETIC MEDICINE"

To the Editor:—An article in the February *Scribner's*, "Prophetic Medicine," by Dr. C. Ward Crampton, contains statements which, to my mind, are excessive. I call the matter to your attention rather than to the editor of *Scribner's* because such articles are frequently appearing in the lay press and their whole tone tends to place the profession in a false, not to say dishonest, light. The effusion in *Scribner's* is particularly distasteful: it is written by a member of the regular profession, the director of the "Health Service Clinic" at the Post-Graduate Medical Hospital of New York, and appears in one of the staidest of American magazines: articles in *Scribner's* have weight with the public because they are usually thoughtful, at least accurate.

"Prophetic Medicine" has as its thesis the familiar and by now well worn appeal for periodic examinations, on the basis that these will detect unsuspected disease tendencies which can be ameliorated and, in this way, an individual's life be prolonged for considerable periods of time.

Let us look at some of the author's statements. It appears, on page 214, that William Adamson, aged 40, has just been overhauled and his physician says to him: "Your condition is about the average of the city man of the corporation vice president type. . . . In a few days you will get a six page record of your tests with my recommendations. Your prospects? *You will live on your present programme till fifty-two or fifty-three. By good fortune and following very simple instructions you can probably live and live well to seventy-five or over . . .*" (italics mine). Is there any clear scientific proof that any "*simple instructions*" of which any living creature is now aware can prolong the life of a man who is going to die at 52 to the age of 75? It must be actuarial proof, of course—statistical proof. If there is any such proof wouldn't it be a good thing to get it into the record—to give, as Pooh-Bah says, "An air of verisimilitude to what would otherwise be a bald and unconvincing narrative?" Are the probabilities in favor of any such statement? Does what we know of physiology, pathology and therapeutics conduce to such a belief? From my own inadequate knowledge of these subjects I should say that the probabilities are exactly contrary to such a supposition.

On page 221 the case of a physician is outlined. His only complaint was fatigue. "Despite unfailing regularity, an intestinal stasis was present. He had unknowingly allowed himself to poison his body for many years, and his kidneys were showing the first faint signs of protest. In another few years he would be a 'case' of chronic nephritis—'Bright's disease.' . . . 'You are a lucky man,' he was told. 'Now we are ahead of it all. We can manage your margin . . . and your prospect of living long will be quadrupled.'"

There you are, ladies and gentlemen—just what you have been wanting to know. The cause of chronic nephritis! And so simple after all these floundering years of doubt—intestinal stasis. But, does any man of standing in the profession believe such rot? Is there any real evidence that there is a stage in the development of chronic nephritis when the process can be stopped by any means applicable by man? And is the medical profession prepared to authorize such ballyhoo?

We now approach the most important of Dr. Crampton's exhibits. "Of the small remainder who take their health examinations, some will fall into the hands of a busy, hurried physician who has his whole attention on curing disease. He makes a cursory, rapid examination in a crowded office hour, slaps his man on the back and says: 'There is absolutely nothing the matter with you. You can get a $100,000 insurance policy any day.' This may be partly true, but it is woefully misleading."

Ponder that paragraph very carefully. Digest it. Notice the busy, hurried physician who has gone and made the mistake of devoting his whole attention to the curing of disease. That is just only the practitioner who has known the candidate for longevity since childhood. Notice the cursory examination. Not one of these painstaking six page recommendations! Probably doesn't know how to make very delicate tests. Notice that woefully misleading slap on the back. Is that any way to treat a wisher for immortality? What is the implication of all this? Well, it is pretty obvious, isn't it? Repent ye while there is yet time. Come to the mourner's bench. Don't go to your doctor: come to the right place. There is only one Allah and Mohammed is his prophet. Prophetic medicine.

Perhaps it would be interesting to the various ladies and gentlemen running life preserving stations to know what would be regarded as evidence for their statements. It can be done in this wise. Two comparative human groups of sufficient size to make the experiment worth while must enter the experience at the same age. I suggest 10,000 as the minimum number worth while and 30 as the age. One of these groups pursues the tenor of its way, uninterrupted by medical advice except when symptoms call; the other submits to annual physical examinations and follows all the advice given by the examiners. These two groups are followed until all the members die. Annual reports as to comparative death rates in the two groups will be looked at with interest but they will not be considered conclusive.

There is only one set of reports of which I have knowledge in which any attempt has been made to approximate the ideal I have suggested. Dr. Crampton mentions them in his paper and the manner of his mentioning them is significant. On page 222 he says: "Of six thousand men examined by an insurance company (reported by Dublin and Fisk) there was a decrease of deaths amounting to 28 per cent—surely worth while." Now the reports of Dublin and Fisk and particularly Knight (*Am. J. M. Sc.* **170**:576 [Oct.] 1925; various papers by Augustus S. Knight, M.D., published by the Metropolitan Life Insurance Company), while I do not agree with the conclusions, do furnish forth the facts. They show that a group of 6,000 policyholders of the Metropolitan Life Insurance Company, all thinking themselves healthy, submitted to examination by the Life Extension Institute beginning in 1915. In 1920 this group showed an improvement in mortality over the expectancy of the American Mortality Tables of 28 per cent. *But the whole experience of the company showed an improvement which reduced this percentage to 24 per cent.* This Dr. Crampton does not take occasion to inform his readers. And in the six-year period, that is, by 1921, the improvement in mortality of this examined group had fallen to 18 per cent. This also Dr. Crampton does not feel called on to divulge.

And will some one please explain how any man is privileged to state that life can be prolonged in an individual twenty-three years when the experiments on which that statement are based have been in operation to date only thirteen years?

"But," it is usually objected, "these examinations do no harm and may do some good. Why interfere?" No one has the slightest desire to interfere. By all means, let them continue. But let us, as a profession, cease to make promises as to their result which we cannot substantiate before we know those results. The profession in its statements to the public has always played fair. When we advocated typhoid inoculation, we had a definite procedure to carry out and its valuable results had been abundantly proved. It is possible

that similar benefits will attend the pursuit of the plan under consideration. But I for one am willing to leave it in the hands of the general practitioner "who has devoted his whole attention to curing disease," in which way I feel certain that the public will be protected from the onslaught of such trumpery as that exhibited by Dr. Crampton.

LOGAN CLENDENING, M.D., Kansas City, Mo.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TREATMENT FOR MENTAL CONDITION ASSOCIATED WITH WORRY CONCERNING SIZE OF SEX ORGANS

To the Editor:—Please advise me concerning the following case: A man, aged 28, whose general health is normal, and unusually good, has been very successful, and has a fine income in a responsible position. He expects to be married in eight or nine months to a finely developed woman. To his great distress, the penis, both in the natural and in the erected state, is extremely small—that is, smaller than I ever saw before—probably half the normal size. This has worried him greatly for some years. Now, in the face of marriage, the fact is almost an obsession. It is a constant worry and he looks forward with many misgivings. The testes seem normal, as do erections and sex appetite. The spermatozoa are normally abundant and active. Some years back he had several homosexual experiences. This has not been repeated for four years and he seems to have outgrown the desire for such abnormalities. He masturbated only slightly, some years ago. These are all the facts. I have assured him in every possible way that, when the time comes, proper instruction in technic will probably obviate any trouble in coitus. Even this assurance does not stop his worry. Aside from the worry about this trouble, he seems to me normally balanced. I have noted that many of the surgical instrument houses advertise a suction penis developer—a sort of a pump arrangement. Is this treatment of any value? Is it worth trying? Even if it would produce no great development, in the face of his constant worry and early marriage, would it be justifiable to advise him to use this instrument? It almost seems to me that he would be better off using it than to go on worrying in this hopeless manner. At least he would feel that he was helping. I cannot find any literature on this subject. Please omit name.

M.D., Colorado.

ANSWER.—Attempts to increase the size of the penis by the production of passive hyperemia by suction instruments are futile. The so-called suction penis developers are, for all practical purposes, nothing but mechanical masturbators. It is unfortunate that reputable surgical instrument houses will stock these worthless and vicious instruments. The federal authorities have declared several proprietary forms of this device fraudulent (see "Adjusto," THE JOURNAL, Feb. 12, 1927: "Perfection Developer" and "Burt Vacuum Tube," THE JOURNAL, Jan. 16, 1926). In view of the history of the patient, it may be suggested that such manipulations are apt to revive his masturbatory inclinations.

The only successful therapy in such instances is a psychic one. It may be suggested to the patient that a small organ will encounter lesser difficulty in the act of defloration than one of larger dimensions. It may also be helpful to quote the experience that the reciprocity of the female does not depend on the size of the male organ. With a view to progeny, the fact may be quoted that fecundation is independent of the factor of size. The persuasive influence of a conservative psychoanalyst may be also considered in handling this case.

PREGNANCY FOLLOWING ECTOPIC GESTATION

To the Editor:—1. What is the relative frequency of full term pregnancy following ectopic gestation? 2. Can you refer me to any gynecologic authority who recommends any treatment other than operation as soon as the condition is diagnosed? What treatment, if any? Please omit name.

M.D., New York.

ANSWER.—1. It is assumed that the first query refers to full term intra-uterine pregnancy following ectopic gestation. Smith (*Surg. Gynec. Obst.* **18**:684, 1914) studied the follow-up records of 192 patients who had been operated on for ectopic pregnancy. During a period of five years following the operation among 144 women who were capable of conception, forty-seven (32.6 per cent) had uterine and twenty-three (16 per cent) had repeated extra-uterine pregnancies. Forty-two of the former women had living children. Funck-Brentano (Des grossesses utérines survenant après la grossesse extrautérine, Thèse de Paris, 1898) made a compilation of ninety-two cases in which spontaneous labor occurred after previous ectopic pregnancy.

2. Robb (*Tr. Am. Gynec. Soc.* **32**:373, 1907) advocated the postponement of an operation while the patient was in a state of profound shock and waiting for improvement in the general condition because he believed that the initial hemorrhage was rarely fatal. Most men, however, favor immediate operation. An exception to the rule of immediate operation is the case in which the acute symptoms have subsided and the blood in the peritoneal cavity has become encapsulated as a hematocele. Such a patient should be put to bed and carefully watched. If the hematocele grows in size or undergoes suppuration, an operation is indicated. In the former case either an abdominal or a vaginal operation may be performed; but when suppuration is present all that is usually necessary is evacuation of the infected hematocele and drainage, through a colpotomy incision. Another exception to immediate operation is a case in which the ectopic pregnancy has advanced to a point at which a fair-sized fetus is present. If the fetus dies it is usually advisable to defer operation for six to eight weeks after fetal death in order to permit the obliteration of the maternal blood sinuses in the placenta and so render the operation relatively bloodless. Too long a time should not elapse between fetal death and operation because the fetal sac may become infected. In cases of advanced ectopic pregnancy with a living child, an immediate operation should be performed. Welton (*Am. J. Obst. & Gynec.* **7**:158, 1924) believes there is nothing to be gained by operating while a patient is in shock. He suggests that a patient in shock be given a trial to demonstrate what she can do by way of a recovery which is demonstrated by systolic blood pressure readings. The usual treatment consists of elevating the foot of the bed, applying heat and abdominal compression and giving morphine.

RETIREMENT OF DISABLED OFFICERS

To the Editor:—In the editorial comment on the retirement of disabled medical officers of the World War (THE JOURNAL, February 11), it was stated that "regular and provisional officers in the Army, Navy and Marine Corps, and emergency officers in the Navy and Marine Corps have all been cared for." I question the authenticity of this sentence, as the latest report I have received on the emergency officers of the navy does not grant retirement privileges. If I am in error and a new ruling has been made, I would appreciate your informing me. If not, I think your article should be corrected.

A. C. DEAN, M.D., Crookston, Minn.

ANSWER.—Emergency officers of the navy and marine corps were granted retirement privileges by an act of Congress, approved June 4, 1920 (41 Stats. 834). This act was amended in 1921 so as to provide that applications for retirement had to be filed not later than Oct. 1, 1921 (42 Stats. 140). A number of private laws have been passed by Congress, since 1921, providing retirement for certain emergency officers of the navy and marine corps, by name, who failed to make application for retirement within the time limit specified in the 1921 amendment.

CONVALESCENT SERUM IN MEASLES

To the Editor:—Please give me the following information concerning the use of convalescent blood or serum in the treatment or prophylaxis of measles: Is there a commercial serum? If so, who makes it? If there is no commercial preparation, what is the best technic for obtaining blood or serum from convalescents and administering it to patients? I am practicing in a strictly rural county and we are having a severe epidemic of measles; there are about 100 cases now, and there is a probability of 200 or 300 more any time. People are primitive and will not observe quarantine. Our county health officer is leaving us for lack of funds, so we must handle the situation ourselves.

FRANK E. HYDE, M.D., Beaufort, N. C.

To the Editor:—Please instruct me as to getting blood from a patient just recovering from measles, and injecting the remainder of the family with this blood. Please omit name.

M.D., Colorado.

ANSWER.—So far as we know, convalescent measles serum is not being marketed. No firm has requested an examination of such a product by the Council on Pharmacy and Chemistry. The question of obtaining convalescent measles serum was discussed in THE JOURNAL, Aug. 21, 1926, page 556, by Park and Freeman.

The simplest way to get the blood is to draw it under aseptic precautions from an elbow vein of the convalescent patient and then to inject 4 or 5 cc. at once into the muscles of the thigh or buttock of the person or persons who are to be protected. In order to avoid coagulation of the blood, a fairly large needle should be used; the barrel of the syringe

should be large enough to hold the amount of blood required in a given case. If many members of the family are to be injected, it may be necessary to draw blood from the vein or veins more than once. It goes without saying that the Wassermann test of the donor may be made beforehand if desired.

Another somewhat more complicated way is to allow the blood of the donor to clot and then to inject 3 or 4 cc. of the clear serum. Here, again, the most painstaking aseptic precautions must be observed at every step.

MULTIPLE PREGNANCY AND ABORTION

To the Editor:—Is it possible for a woman with a multiple pregnancy—twins—to abort one in the second month (artificially) and the other in the sixth month (artificially also)? Can you give me any references to such cases? Does each fetus have a separate placenta? Kindly omit name.

M.D., North Carolina.

ANSWER.—It is possible for a woman with twins to produce the expulsion of one fetus, artificially and unwittingly, long before the other. If the woman has a double uterus with an ovum in each horn, the case cited could be explained easily; but even in a single uterus a similar occurrence may be noted. Without intervention occasionally one fetus may be expelled and the other go to full term. These are cases of double-ovum twins with two distinct placentas. Usually, however, when a fetus dies it is retained until the end of pregnancy and it is then expelled as a thin, flat, mummified fetus—fetus papyraceus or compressus. The flatness is due to compression of the fetus between the uterine wall and the membranes of the living child. This occurrence is about three times as frequent in single-ovum as in double-ovum twins. De Lee (Principles and Practice of Obstetrics, ed. 4, 1924, p. 497) mentions that he delivered twins at term of a woman who five months previously had had an abortion of a five months fetus. De Lee quotes Watkins' case of the delivery of twins at three months and of triplets at term of the same pregnancy. Holzbach (*Zentralbl. f. Gynäk.* **47**:222, 1923) reports a case in which he removed a two months ovum by curettage because of bleeding and less than three months later found the uterus to contain a five to six months' fetus as evidenced by palpation, auscultation and roentgenograms. The uterus was normal.

TESTED COD LIVER OIL

To the Editor:—Kindly give me some information in regard to vitamin tested cod liver oil. What is the exact reason for the need of testing? Do the livers of fish vary in concentration of vitamin A? Why? What fish livers are commonly used for manufacturing the oil?

HELEN C. GOODSPEED, Philadelphia.

ANSWER.—Cod liver oils are tested because it has been found that different lots differ in potency.

Reports indicate that the livers of codfish vary in content of vitamin A and that this variation is probably dependent on the food consumed.

The fresh livers of *Gadus morrhua* Linné and other species of *Gadus* are commonly used for manufacturing oil.

OCCIPUT POSTERIOR POSITION IN LABOR

To the Editor:—We have been having in this locality a remarkable number of occipitoposterior positions this past year. Recently I had four in a row, all in primiparas. Will you please give me some reason for this and the best way to handle it in the case of primiparas? Please omit name.

M.D., South Dakota.

ANSWER.—The unusual number of occiput posterior cases may be purely accidental or it may be due to the fact that the patients were seen earlier in labor than usual. In a large number of cases the occiput is posterior at the onset of labor, but in about 95 per cent of these cases the occiput rotates anteriorly during labor and the head is delivered spontaneously with the occiput under the symphysis pubis. Hence, if patients are examined after labor has been in progress a long time, relatively few cases of occiput posterior will be found. The latter are spoken of as cases of persistent occiput posterior and are abnormal. A careful examination should be made to determine, if possible, the cause of this abnormality. If the head is high no treatment is indicated unless there is a definite cephalopelvic disproportion, in which case a cesarean section should be performed. Otherwise a policy of watchful waiting should be pursued until an indication for intervention arises. In the first stage rest should be secured and the pains made bearable by morphine combined with magnesium sulphate, scopolamine or atropine. If the progress of cervical dilatation is very slow and the mother begins to show the effects of it, a colpeurynter may be inserted into the lower uterine segment, under strict, aseptic precautions. In a primipara, if the head remains high for a long time after the cervix has been completely dilated, the patient should be anesthetized and the occiput rotated anteriorly and drawn farther down with the hand or with forceps. Nothing further need be done, usually because most patients can in due time be delivered spontaneously or with low forceps. In a multipara the same procedure may be followed, or a version and extraction be performed. If the head is engaged and delivery does not take place for a long time after the cervix is completely dilated, the occiput should be rotated anteriorly, in most cases manually but sometimes instrumentally, with or without anesthesia. Most patients will then deliver themselves spontaneously or the baby may easily be delivered with forceps. Lubrication of the vagina with green soap will greatly facilitate rotation of the occiput.

DURATION OF INFECTIVE PERIOD OF POLIOMYELITIS

To the Editor:—What is the duration of the infective period of acute anterior poliomyelitis? How long should a patient be quarantined? How may persons in close contact with the disease be prevented from becoming carriers?

MARY KNOTT BAZEMORE, M.D., West Palm Beach, Fla.

ANSWER.—The duration of the infective period of epidemic poliomyelitis is not known definitely but it is believed that it does not extend beyond the third week after the first symptoms. At any rate, the usual quarantine period required is twenty-one days. It would be reasonable to assume that persons coming in close contact with patients with epidemic poliomyelitis might do something to protect themselves from becoming carriers by wearing suitable face masks and gloves, as well as gowns, and by observing in an especially conscientious and thorough manner all the usual precautions against conveying infectious materials from one person to another.

CHLORINATION OF WATER SUPPLIES

To the Editor:—While I was in France a few weeks ago my attention was called to the fact that the sanitary authorities condemned the use of chlorine in the aqueducts which supply potable water, because it was discovered that the continual drinking of water sterilized with chlorine produced many ailments. They substituted ozone for chlorine. Please give me your opinion regarding the advantages for the public health by using ozone instead of chlorine.

R. J. VALIENTE M., M.D., New Orleans.

ANSWER.—No satisfactory evidence has ever been produced in this country to indicate that water sterilized with chlorine produces any harmful effects on the human system. In 1924, nearly 4,000,000,000 gallons of water a day were being treated in this country with chlorine and it is estimated that not less than half of the population of the country is now consuming chlorinated water. The amounts of chlorine that can be satisfactorily applied vary from 0.15 part of chlorine per million parts of water to about 0.8 part of chlorine. By the time the water reaches the consumer the free chlorine content is reduced to a small fraction of the amount actually dosed. It is almost unbelievable that such small amounts of chlorine can have any physiologic effect. Ozone has not found favor in this country as a means of treating public water supplies. The efficiency of this process depends on a thorough mixing of ozonated air with the water, as well as on an adequate period of contact. While the first consideration is a purely mechanical one, it has undoubtedly been responsible for unsatisfactory functioning of ozonizing plants. It has also been found that ozone treatment in this country is a more expensive process than chlorination. From the standpoint of the public health, ozone would appear to have no advantage over chlorine and to have the disadvantage of being an uncertain germicidal agent under practical conditions.

TREATMENT OF PERSISTENT GONORRHEA

To the Editor:—I have a patient with gonorrhea who also has had a prostatitis. Now the second-specimen urine and third-specimen urine are clear. The first-specimen urine has been cloudy for three weeks, showing periods of improvement at different times. I am now using strong silver protein (protargol), 1.5 per cent. I have used potassium permanganate, silver nitrate and diathermy. Please advise how to clear the first urine. Please omit name.

M.D., Ohio.

ANSWER.—Persistent gonorrheal disturbances in the anterior urethra are as a rule maintained by submucous infiltrations. These may be discovered and localized by the introduction into the urethra of an olive tipped sound or bougie. After they are once localized, they ought to be massaged over a solid steel sound. The sounding has to be followed by an

irrigation with a mildly antiseptic solution. It is not so much the constituents of the solution as the mechanical effect that produces the artificial edema leading to a rapid desquamation.

After once the general cloudiness of the urine has subsided, the systematic dilation of the urethra by sounding should be followed by the instillation of some astringent fluid, such as a 0.5 per cent aqueous solution of zinc sulphate. In some instances the discharge is maintained by persistent inflammation and sclerosing of the glands on the floor of the urethra. Those can be palpated over an introduced sound as hard, sensitive granules. They are definitely recognized by endoscopic examination and are best destroyed by a fine galvanocautery or a diathermic needle introduced through the endoscopic tube.

GASOLINE FOR SKIN INFECTIONS

To the Editor:—The bane of the farmer and workman's doctor is skin infection. Lately I have been using plain gasoline to clean up these various skin sores and infections, and with fine success. Is there any contraindication to its use and why has it not gained a wider place in these various infections to which ointments are an aggravation? I follow its cleansing use with solution of hexylresorcinol. What is the place of gasoline as a germicide and why is it not more commonly employed?

W. H. D., M.D., Moville, Iowa.

ANSWER.—Gasoline has been suggested occasionally, but its irritating properties have seemingly not permitted it to gain much favor. This can be appreciated when it is realized that there is a great variation in the commercial forms of gasoline, both from the relation to the source of gasoline and also to the brand that is used. The more volatile the product, the more antiseptic and parasitic it is; but, on the other hand, it is also increasingly irritating. Dermatitis from gasoline has been reported frequently (THE JOURNAL, Nov. 6, 1926, p. 1579; May 22, 1926, p. 1643). A great objection to the use of gasoline is the hazard of its inflammability. Purified deodorized kerosene has had some vogue for use in skin diseases, chiefly as a substitute for alcohol. Commercial kerosene has also had some use for seborrheic dermatitis of the scalp. The possibility of absorption of the kerosene or gasoline through the unbroken skin is practically nil; on the other hand, it acts as a solvent on the skin, which increases as one goes from the petrolatum to the highly volatile benzin. Any oil used to an excess on the skin will, of course, have a tendency to produce folliculitis. Purified gasoline, that is, purified petroleum benzin, has been largely used as a solvent for iodine in the disinfection of the skin, but if evaporation is prevented, it has a marked irritant effect and even a caustic action; in fact, Sehrwald (*Deutsche med. Wchnschr.*, 1913, p. 318) has recommended it clinically as a counterirritant. The general conclusion is that gasoline as a germicide for use on the scalp will do nothing that cannot be done by other substances, with less risk of undesirable effects.

USE OF EPINEPHRINE HYDROCHLORIDE SOLUTION IN THE EYE

To the Editor:—Recently I have been treating a retired physician who, against my advice, used several times a day a few drops of 1 in 1,000 epinephrine chloride solution in his eyes. This was followed by dilatation of the pupils and increased intra-ocular pressure—a nice case of glaucoma. A married woman of 35, a myope of high degree, who had been through great emotional stress, had a mild conjunctivitis, for which I prescribed boric acid, epinephrine hydrochloride 1 in 1,000, 40 minims to an ounce of water. The eye in which this was used dilated widely and has had a slow response to pilocarpine. I am writing a paper for our medical society on glaucoma, and would appreciate it if you would advise me whether or not the secondary effect of epinephrine has a tendency to increase intra-ocular pressure. I have never seen this occur before with the use of epinephrine over fifteen years; furthermore, both of these cases might have been caused by other things.

M. H. STUART, M.D., St. Petersburg, Fla.

ANSWER.—The first case would seem to be a positive response to the Knapp epinephrine test for a glaucomatous tendency. In cases in which there is a predisposition to glaucoma, the use of epinephrine hydrochloride solution (1 in 1,000) in the conjunctival sac produces a dilatation of the pupil and at times hypertonicity, whereas in the normal eye there is no response to epinephrine used in that manner. In the second case, the epinephrine cannot be held responsible for the mydriasis, unless there should be a heretofore undescribed idiosyncrasy toward the drug. There is a very definite phase of secondary hypertonicity after the use of epinephrine subconjunctivally. When injected subconjunctivally, by absorption into the orbit, epinephrine stimulates the retrobulbar sympathetics which control the vasomotor system of the uvea. There results a marked vasoconstriction with consequent diminution in the actual content of the eyeball. The subsequent vasodilatation, which physiologically follows any vasoconstriction, can lead easily to a hypertonicity, unless controlled with miotics. This secondary phase has been emphasized recently by Schmidt (*Ber. d. Deutsch. Ophth. Gesellsch.* **46**:50, 1927).

TREATMENT OF CHRONIC PEMPHIGUS

To the Editor:—Please give the best plan of treatment for a case of chronic pemphigus in a man of 72. His general condition is good. Four carious teeth have been extracted during the course of the disease. Please omit my name.

M.D., Illinois.

ANSWER.—Some form of arsenic is still the sovereign remedy for chronic pemphigus. It may be given by mouth as solution of potassium arsenite (Fowler's solution) or pills of arsenic trioxide with pepper (Asiatic pills). In the so-called Dovis treatment iron and arsenic (in the form of ferric cacodylate) is given intravenously and a thromboplastic preparation intramuscularly on alternate days. In the hands of a few observers this method has caused complete remission and apparent cures in a few cases. In most cases there have been relapses, and eventually a fatal termination. Occasional recoveries have been reported following intravenous injections of mercurochrome-220 soluble. Trypars-amide also may be tried. The local treatment of pemphigus has not changed; baths and bland applications should be used. The prognosis in every case of true pemphigus must be guarded.

HYPERSIALOSIS

To the Editor:—A man, aged 58, has had hypersecretion of the salivary glands for more than a year without any apparent cause. The only relief I can give him is from the use of atropine and this is only temporary. As soon as he stops the atropine, the hypersecretion begins. Kindly advise what, in your opinion, would be beneficial in a case like this. Please omit my name.

M.D., West Virginia.

ANSWER.—Treatment in any case of hypersialosis can be successful and permanent only when a careful search for the etiologic factor has been made, and the factor discovered and removed. Symptomatic measures include the use of atropine, opium, and bromides in full doses. If the secretion in the mouth is highly acid, an alkaline mouth wash should be used. Astringent mouth washes, such as alum, 2 Gm. to 100 cc. of water, should be used. The use of filtered, short wavelength roentgen rays locally is recommended.

POSSIBLE OPERATION FOR "BAGGY" EYELIDS

To the Editor:—A patient of mine, a youth, aged 21, has edema below both eyes and across the nose, following an antrum puncture five years ago. No pus was obtained at that time, and the antrums are fairly clear now. For cosmetic purposes he wants the edema removed. Could you suggest some treatment and some plastic surgeons who will handle this case?

E. W. GOLDSTEIN, M.D., Pittsburgh.

ANSWER.—It seems that the pathologic condition in this case must be other than that of an ordinary edema. Edema is usually the result of an acute inflammatory process or some blocking of lymphatic drainage which is usually of a temporary nature. If the edema is due to a chronic interstitial nephritis, it may of course last for a long time; but it is doubtful whether this is true in the case mentioned. The tissues of the lower lids are extremely loose, so is it not possible that they are so-called baggy lids and that there is no actual edema present? It seems doubtful whether cosmetic work would be of any value here. It is questionable whether a reputable plastic surgeon would undertake the correction of such a case unless the deformity is very pronounced, so that it embarrasses the individual not only in his social contact but also in his occupation.

TREATMENT OF SCLERODERMA

To the Editor:—I have under observation for the past year a case of scleroderma. I have tried all treatments recommended and in the last few months seem to be getting some results from endocrine treatments. Some way the family got the news that the Johns Hopkins Hospital had perfected a treatment that was successful and they wanted to carry her to some doctor that was supposed to have this treatment. I had not seen anything in THE JOURNAL about this, and knowing the financial condition of the family, I asked them to wait until I could find out about this treatment. Do you know of any one doing any research work for this trouble?

J. M. ANDERSON, M.D., Sears, Fla.

ANSWER.—In some cases of diffuse scleroderma, thyroid substance is very beneficial; in other cases it is not. It should be given careful but thorough trial. In THE JOURNAL,

January 7, page 1, appeared an article from the medical clinic of the Johns Hopkins University School of Medicine. The author of the article was Dr. Warfield T. Longcope and the title, "Hypoglycemia in Scleroderma: The Metabolism in Eight Cases with Reference to the Function of Glands of Internal Secretion."

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ARKANSAS: Little Rock, May 9-10. Sec., Reg. Bd., Dr. J. W. Walker, Fayetteville. Sec., Homeo. Bd., Dr. A. A. Pringle, Eureka Springs. Sec., Eclectic Bd., Dr. C. E. Laws, 803½ Garrison Ave., Fort Smith.

COLORADO: Denver, April 3. Sec., Dr. Philip Work, 324 Metropolitan Bldg., Denver.

DISTRICT OF COLUMBIA: Washington, April 10. Sec., Dr. Edgar P. Copeland, Suite 110, 1801 Eye St., Washington.

HAWAII: Honolulu, April 9-12. Sec., Dr. James A. Morgan, Room 48 Young Bldg., Honolulu.

IDAHO: Boise, April 3. Commissioner of Law Enforcement, Hon. F. E. Lukens, Boise.

ILLINOIS: Chicago, April 10-12. Supt. of Reg., Mr. V. C. Michels, Springfield.

LOUISIANA: New Orleans, May 1. Sec., Homeo. Bd., Dr. F. H. Hardenstein, 830 Canal St., New Orleans.

MINNESOTA: Minneapolis, April 17-19. Sec., Reg. Bd., Dr. A. E. Comstock, 524 Lowry Bldg., St. Paul. Basic Science examinations, April 3. Sec., Basic Science Bd., Dr. E. T. Bell, U. of Minnesota, Minneapolis.

MONTANA: Helena, April 3-5. Sec., Dr. S. A. Cooney, Power Bldg., Helena.

NEBRASKA: Omaha, May 1. Sec., Basic Science Bd., Mr. Lincoln Frost, Lincoln.

NEVADA: Carson City, May 7-9. Sec., Dr. Edw. E. Hamer, Carson City.

NEW MEXICO: Santa Fe, April 9-10. Sec., Dr. Wm. T. Joyner, Roswell.

RHODE ISLAND: Providence, April 5-6. Sec., Dr. B. U. Richards, State House, Providence.

Pennsylvania Reciprocity Report

Mr. C. D. Koch, director of the Professional Education Bureau of the Pennsylvania Board of Medical Education and Licensure, reports that 15 candidates were licensed by reciprocity and that 16 candidates were licensed by endorsement of their credentials from July to December, 1927. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Howard University School of Medicine		(1912)	Virginia
Northwestern University Medical School		(1915)	Illinois
Johns Hopkins University School of Medicine		(1922)	New Jersey
University of Maryland School of Medicine and the College of Physicians and Surgeons		(1924)	Maryland
Tufts College Medical School		(1922)	New York
University of Michigan Medical School		(1913) (1924) (1920) New York; (1922) District of Columbia	Michigan
Miami Medical College, Cincinnati		(1906)	Michigan
University of Cincinnati College of Medicine		(1919)	Ohio
Jefferson Medical College of Philadelphia		(1912) New Jersey; (1919) Minnesota; (1924) Maryland	Iowa

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Harvard University Medical School		(1923) (1924) (1925, 3)	N. B. M. Ex.
Cornell University Medical College		(1925)	N. B. M. Ex.
Western Reserve University School of Medicine		(1926)	N. B. M. Ex.
Jefferson Medical College of Philadelphia		(1926, 2)	N. B. M. Ex.
University of Pennsylvania School of Medicine		(1924) (1925, 3) (1926)	N. B. M. Ex.
Woman's Medical College of Pennsylvania School of Medicine		(1926, 2)	N. B. M. Ex.

North Carolina December Report

Dr. John W. MacConnell, secretary of the North Carolina Board of Medical Examiners, reports the written examination held at Greensboro, Dec. 1, 1927. One candidate was examined and passed. Sixteen candidates were licensed by endorsement of their credentials. The following colleges were represented:

College	PASSED	Year Grad.	Number Passed
Baltimore Medical College		(1902)	1

College	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement with
University of Alabama School of Medicine		(1912)	Alabama
University of Louisville School of Medicine		(1909) (1914)	Texas
University of Maryland School of Medicine and the College of Physicians and Surgeons		(1924)	Maryland
Long Island College Hospital		(1907)	New York
Jefferson Medical College of Philadelphia		(1908)	Penna.
Medical College of the State of South Carolina		(1913) (1920)	S. Carolina
Medical College of Virginia		(1910)	Virginia
University College of Medicine, Richmond		(1909)	Virginia
University of Virginia Department of Medicine		(1912) (1920) Virginia; (1924, 2) (1925) N. B. M. Ex.	S. Carolina
University of Edinburgh, Scotland		(1922)	S. Carolina

Nevada November Examination

Dr. Edward E. Hamer, secretary of the Nevada Board of Medical Examiners, reports the written examination held at Carson City, Nov. 7-9, 1927. The examination covered 11 subjects and included 110 questions. An average of 75 per cent was required to pass. Of the 6 candidates examined, 5 passed and 1 failed. Twelve candidates were licensed by reciprocity and 1 candidate was licensed by endorsement of his credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
College of Physicians and Surgeons, Los Angeles		(1918)	88
Tufts College Medical School		(1910)	76.5
Memphis Hospital Medical College		(1907)	80.1
McGill University Faculty of Medicine		(1919)	85.9
University of Rome, Italy		(1916)	77.7*
Tokyo Charity Hospital Special Medical School, Japan	FAILED	(1924)	53

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas School of Medicine		(1913)	Texas
Cooper Medical College, San Francisco		(1889)	California
University of California Medical School		(1927)	California
University of Illinois College of Medicine		(1924)	Utah
University of Louisville School of Medicine		(1924)	Kentucky
Ensworth Medical College, St. Joseph		(1894)	Missouri
Kansas City Hahnemann Medical College		(1913)	Kansas
Kansas City Hospital College of Medicine		(1885)	Colorado
Columbia University College of P. and S.		(1914)	S. Dakota
University College of Medicine, Richmond		(1901)	N. Carolina
Dalhousie University Faculty of Medicine		(1925)	Ohio
University of Western Ontario Medical School		(1911)	Montana

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
University of Pennsylvania School of Medicine		(1925)	N. B. M. Ex.

* Verification of graduation in process.

Nevada May Examination

Dr. Edward E. Hamer, secretary of the Nevada Board of Medical Examiners, reports the written examination held at Carson City, May 2-4, 1927. The examination covered 13 subjects and included 100 questions. An average of 75 per cent was required to pass. Of the 3 candidates examined, 2 passed and 1 failed. Four candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
University of Maryland School of Medicine and the College of Physicians and Surgeons		(1907)	83.8
Kansas City University of Physicians and Surgeons		(1924)	78.9
Tokyo Charity Hospital Special Medical School, Japan	FAILED	(1924)	57.8

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Baltimore		(1911)	California
University of Pittsburgh School of Medicine		(1913) (1911) Pennsylvania; (1915) Utah	Penna.

South Carolina November Examination

Dr. A. Earle Boozer, secretary of the South Carolina Board of Medical Examiners, reports the written examination held at Columbia, Nov. 8-10, 1927. The examination covered 17 subjects and included 80 questions. An average of 75 per cent was required to pass. Of the 3 candidates examined, 2 passed and 1 failed. Six candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
Washington University School of Medicine		(1927)	86.9
Woman's Medical College of Pennsylvania		(1926)	86.9
Howard University School of Medicine	FAILED	(1925)	66.1

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Emory University School of Medicine		(1925)	Georgia
University of Georgia Medical Department		(1922) (1926)	Georgia
Chicago College of Medicine and Surgery		(1913)	Kentucky
Tulane University of Louisiana School of Medicine		(1921)	Alabama
Maryland Medical College, Baltimore		(1913)	N. Carolina

Book Notices

DIAGNOSIS AND TREATMENT OF DISEASES OF THE STOMACH WITH AN INTRODUCTION TO PRACTICAL GASTRO-ENTEROLOGY. By Martin E. Rehfuss, M.D., Assistant Professor of Medicine at Jefferson Medical College. Cloth. Price, $12. Pp. 1236, with 519 illustrations. Philadelphia: W. B. Saunders Company, 1927.

To one who has been watching the splendid investigative work of Dr. Rehfuss during the last decade or more, the appearance of a book on diseases of the stomach from his hands cannot come as a surprise. In presenting this book to the profession, however, the author seems to have lost sight of the fact that, while his experimental and investigative work is of great value to the medical student and the investigator, it may become a handicap rather than a help when incorporated in a textbook. Dr. Rehfuss is acquainted with the subject matter under discussion, but the clinical value is lost in a maze of laboratory data. After all, there is still a great question as to the value of intricate methods of gastric analysis in the diagnosis of the majority of gastro-intestinal conditions. Clinical pictures are desired. Many methods described in this volume, such as the technic of roentgen-ray examination and dark room procedures, are best relegated to books on roentgenology. The Lyon method of biliary drainage does not seem to meet with favor by the majority of the profession; the other side of the question should be stated. As duodenal ulcer is ten times as frequent as gastric ulcer, it would seem that the whole subject should be discussed under the caption of duodenal or gastroduodenal ulcer rather than under the heading of gastric ulcer. Students and interns still speak of gastric rather than duodenal ulcers. Gastric syphilis might be given in greater detail. In spite of these drawbacks this work has many excellent points. It is complete. The student with an investigative turn of mind can find extensive literature on many of the experimental phases of gastro-enterology. The clinician can obtain valuable information. The chapters on the relation of extragastric conditions, such as cholecystitis, appendicitis, renal and cardiac lesions, and pancreatitis, are excellent. The association of Dr. Deaver in the description of surgical treatment, of Chevalier Jackson on endoscopic methods and of Drs. Manges and Farrel on cholecystography makes this work authoritative. The literature quoted is voluminous.

EDMUND LESSER'S LEHRBUCH DER HAUT- UND GESCHLECHTSKRANKHEITEN. Band II. Geschlechtskrankheiten. Von J. Jadassohn, Geh. Medizinalrat, o. Professor und Direktor der Universitäts-Hautklinik in Breslau. Fourteenth edition. Cloth. Price, 26 marks. Pp. 467, with 95 illustrations. Berlin: Julius Springer, 1927.

This edition of Lesser's popular work appears in a new and completely revised form from the pen of one of the world's greatest dermatologists. The name of Jadassohn is a sufficient guarantee of the painstaking and thorough revision that this work has undergone. The author's personality, his enormous clinical experience, and his thorough knowledge of the literature are reflected in every page. Volume II considers the venereal diseases in conformity with the continental grouping of the subject and takes up gonorrhea and its complications, chancroid, acquired and hereditary syphilis, and, more briefly, erosive balanitis and lymphogranuloma inguinale. In the eighty-seven pages devoted to gonorrhea is found a splendid summary of our present knowledge of this disease. The therapeutic suggestions are conservative and emphasize such procedures as can be easily carried out by the practitioner. Contrary to certain French authorities, the author is inclined to minimize the value of the urethroscope in diagnosis. The newer methods of chemotherapy, specific vaccine and protein therapy are given proper evaluation. In spite of the large number of newer silver salts that are mentioned, it is interesting to note that the writer believes that silver nitrate in proper dosage will cure most gonorrheal infections. The therapeutic management of the gonorrheal complications emphasizes chiefly the medical side. Two chapters on soft chancre (twenty-four pages) are classic descriptions of this disease. The section on syphilis (314 pages) includes every phase of the subject. The inclusion of visceral and nervous syphilis gives a far broader view than the usual description found in textbooks of dermatology which are limited to the skin and mucous membrane. The author emphasizes the present state of flux in syphilotherapy and, while giving due credit to the great advance of the last two decades both in diagnosis and in therapeusis, warns us that the criteria of cure, i. e., of complete eradication of spirochetes, are still insufficient. Conservatism is apparent in the advice not to exceed a dosage of 0.6 Gm. of neoarsphenamine and preferably 0.45 in males, and not to exceed a total dosage of from 4.5 to 6 Gm. in one course. There are many excellent illustrations and an addendum giving useful formulas. Viewing this work as a whole and comparing it with texts in the English language, we do not know of any single volume that gives an equally compact yet complete and masterly presentation of the subject of venerology.

A TEXT-BOOK OF PHYSIOLOGY: For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., Sc.D., Professor of Physiology in the School of Hygiene and Public Health, The Johns Hopkins University. Tenth edition. Cloth. Price, $6.50. Pp. 1081, with 308 illustrations. Philadelphia: W. B. Saunders Company, 1927.

Perhaps no writer of textbooks has been more diligent in keeping his volume abreast of the times than has the author of Howell's physiology. The text is now in its welcome tenth edition; the ninth was published as recently as 1925. In his preface the author writes as follows:

"In view of the great volume of experimental work upon physiology that is continually appearing in our journals, and the fact that special disciplines are required for a full comprehension of the advance along different lines, it is almost presumptuous for any one worker to attempt to give a presentation of the status of the whole subject. The author feels keenly his deficiencies for such a task, and if it were a matter of starting anew he would shrink from undertaking it. There is, however, a certain obligation, in the case of a book already established, to maintain its usefulness as far as possible by the preparation of new editions at frequent intervals."

It is safe to say that others will not be as conscious of the deficiencies as of the excellences of the book. New material has been built into it on the following subjects: muscle contraction; the chemistry of muscle; photography of the action current of nerves; the nature of the nerve impulse; the effects of normal conditions on the knee jerk; conduction paths in the spinal cord; the physiology of the cortex of the brain; postural reflexes; the labyrinth; blood constituents; physiology of the cerebellum, medulla and eye; the method of determining the pressure in the blood capillaries; the flow of blood through the lungs per minute; the vasomotor system; oxygen and carbon dioxide in the blood; enzymes; the secretion of gastric juice and other aspects of gastric, intestinal and pancreatic digestion; bile pigments; bile acids; the physiology of the gallbladder and spleen; the formation of urea; the ductless glands; vitamins, and other aspects of nutrition and dietetics. Even this long list does not include all of the new material which Professor Howell has consulted for the new edition of his book.

MODERN MEDICINE: Its Theory and Practice in Original Contributions by American and Foreign Authors. Volume V. Diseases of the Blood—Diseases of the Lymphatic System—Diseases of the Ductless Glands—Diseases of the Urinary System—Vasomotor and Trophic Disorders—Diseases of the Locomotor System. Edited by Sir William Osler, M.D., F.R.S. Re-edited by Thomas McCrae, M.D., Professor of Medicine in the Jefferson Medical College, and Elmer H. Funk, M.D., Assistant Professor of Medicine, Jefferson Medical College. Third edition. Cloth. Price, $9. Pp. 948, with 93 illustrations. Philadelphia: Lea & Febiger, 1927.

This, the fifth volume of the new edition of a renowned work, requires little comment. It covers diseases of the blood, lymphatic system, ductless glands and urinary system; vasomotor and trophic disorders and diseases of the locomotor system. In recent months there have been notable advances in the treatment of diseases of the blood. These matters are recorded in the new book. The liver treatment of pernicious anemia is briefly given; the favorable effect of mercury quartz lamp therapy on purpura hemorrhagica is mentioned. There is a table giving the results of splenectomy in a total of 1,349 cases distributed among thirteen

conditions. The physiology of the pituitary body is ably summarized in about eight pages. Much space is devoted to diseases of the thyroid. A valuable section is entitled "Important Advances of the Last Decade in Our Knowledge of Diseases of the Kidney." The authors who have contributed to this, as to the other volumes in the series, are eminent men in their fields.

DIE CHIRURGISCHE BEHANDLUNG DER GEHIRNTUMOREN: Eine klinische Studie. Von Dr. Herbert Olivecrona, Privatdozent, Oberarzt an der chirurgischen Universitätsklinik im Seraphimerkrankenhaus, Stockholm. Paper. Price, 27 marks. Pp. 344, with 228 illustrations. Berlin: Julius Springer, 1927.

This monograph represents a thorough study of 105 intracranial tumors, seventy-five of which were verified microscopically on operation or at necropsy. Of the remaining thirty, twelve were classed as suggestive of tumor and eighteen as unverified. This classification of his material illustrates the influence of Cushing on Olivecrona's clinic, and it is obvious throughout the entire work. Perhaps in no other field or surgery has the United States exerted such a commanding influence. The work adds nothing new to our ideas of neurologic surgery. It is unfortunate that it does not include an attempt to correlate clinical and pathologic pictures because the future progress in neurologic surgery certainly lies in that direction. It is without any doubt the most thorough report on a clinical study of intracranial tumors that has come from a continental surgeon and speaks volumes for the ideals and ambitions of the author.

A TEXT-BOOK OF THERAPEUTICS INCLUDING THE ESSENTIALS OF PHARMACOLOGY AND MATERIA MEDICA. By A. A. Stevens, A.M., M.D., Professor of Applied Therapeutics in the University of Pennsylvania. Seventh edition. Cloth. Price, $6.50 net. Pp. 758. Philadelphia: W. B. Saunders Company, 1927.

The seventh edition of a work of established value requires little comment. The book is in three essential divisions. The first is an introductory section of thirty-two pages containing material on the composition and preparation of drugs, incompatibility, methods of administration and conditions modifying the effects of drugs. The second great section (491 pages) is entitled "Drugs." In this, the subject matter is grouped according to pharmacologic effect. The same section contains a division of thirty-four pages dealing with remedial measures other than drugs. The third section (195 pages), which is on "Applied Therapeutics," gives the treatment of the various diseases and contains a number of prescriptions. "The names and composition of the various official preparations have been made to conform with those of the Tenth Decennial Revision of the U. S. Pharmacopeia, which became effective, January, 1926. References to the following drugs and remedial measures appear for the first time: barium, ephedrine, ethylene, butyn, sulpharsphenamine, tryparsamide, stovarsol, thyroxin, insulin, amydopyrine, parathyroid hormone, bismuth potassium tartrate, mercuric oxycyanide, flumerin, novasurol (merbaphen), hexylresorcinol (caprokol), gentian violet, scarlet fever toxin and antitoxin, erysipelas streptococcus antitoxin, medical diathermy, transfusion of blood, and heliotherapy."

POLIOMYELITIS WITH ESPECIAL REFERENCE TO THE TREATMENT. By W. Russell MacAusland, M.D., Surgeon-In-Chief, Orthopedic Department, Carney Hospital, Boston. Cloth. Price, $5.50 net. Pp. 402, with 173 illustrations. Philadelphia: Lea & Febiger, 1927.

This is a well written and complete exposition of the present-day status of the subject of infantile paralysis, especially from the standpoint of treatment. It is a modern comprehensive account of the disease: one that presents practically all its phases, especially the principles of treatment. The greatest progress has been made in the methods of treatment and particularly in the orthopedic field. Deformity can now be prevented in nearly every instance. The return of function can be hastened by proper treatment of the involved areas. Finally, by the use of surgical procedures the wearing of cumbersome apparatus may be obviated in the majority of cases. From the large number of operative procedures that have been devised for the relief of paralytic conditions, the author has selected those measures that have stood the test of time and can be accepted as standard. He emphasizes the great importance of the prevention of the development of deformities and the necessity of their early correction when they have occurred. When the value of these principles is impressed on the minds of all medical men, the number of deformities in infantile paralysis will be reduced to a minimum. The possibility of the restoration of function to paralyzed limbs is greater today than ever before, thanks to available therapeutic and operative measures. The author believes it is feasible that a serum test might be worked out and made on children of the most susceptible age to determine the possibility of establishing individual susceptibility. He believes that there is little doubt that human carriers play a part in the diffusion of poliomyelitis since the virus has been proved to exist on the mucous surfaces. He states that there have been instances pointing to foodstuffs as carriers of the infection. Concerning the various types of serum he states that at present it is impossible to judge the efficacy of any kind of serum, whether normal or immune in form or of animal or human nature. The prevention of deformity and the correction of deformity as soon as recognized are the most important factors in the treatment of infantile paralysis. Since the etiologic factors that enter into the formation of deformity are known and means are at hand to prevent and correct malposition, few cases of structural deformity should ever develop. One must be on the alert for the occurrence of deformity at all times. As soon as recognized, at whatever stage of paralysis, it should be corrected. Mechanical means, manipulative measures and operative treatment should be used as indicated. This book should be of great value to the general practitioner, who is the one who usually sees these cases first and whose judgment determines, to a marked degree, the ultimate result of recovery of function. It is a valuable book to the pediatrician, the neurologist and the orthopedic surgeon.

NERVE TRACTS OF THE BRAIN AND CORD. Anatomy: Physiology: Applied Neurology. By William Keiller, F.R.C.S., Professor of Anatomy and Applied Anatomy, University of Texas. Cloth. Price, $8. Pp. 456, with illustrations. New York: Macmillan Company, 1927.

This book is stated to be "the result of twenty years' experience in teaching anatomy of the brain and cord in such a manner as to enable the students to approach nervous diseases, thinking in terms of anatomy, physiology and pathology, as applied to the nervous system." Such a manner cannot be commended too highly. The ordinary wide separation between the teaching of anatomy, physiology and clinical neurology is responsible for many of the delusions relating to the difficulty of this subject which most students inherit. Part I supplies a laboratory manual for the study of the nerves and tracts in the central nervous system. Parts II and III "form the basis of a course of thirty lectures, giving in part II a summary of the anatomy and physiology of the nerve tracts . . . and in part III the leading features of the better known nervous diseases, correlating their symptomatology with anatomical, physiological and pathological data." There is necessarily considerable repetition of material in parts I and II. The author has attempted, with considerable success, to correlate the most recent clinical and physiologic research with his anatomic description. The author's zeal in this direction at times permits the introduction of too many controversial and at present unconfirmed theories for undergraduate consumption. For example, p. 192: "The pyramidal rigidity in the legs is extensor in type, and is due to the weakness of the flexors and to the postural action of the cerebellum." Muscle tone and decerebrate rigidity are described without any reference to the monumental work of Magnus and his school. There is a general acceptance of the teaching of the English school of neurology. In the section of applied neurology, perhaps properly, the space apportioned to a disease is not related directly to its frequency and importance. The clinical cases are described, for the most part, from the literature and therefore do not permit of the same critical comparison as if examined by the author. More than a hundred illustrations are grouped together in the back of the book. References on various pages to a large number of these do not permit easy reading or

comfortable study. The illustrations are indexed by number; opposite each one are the numbers of the pages on which the text refers to the illustrations. In some instances as many as forty-two page references are listed against an illustration, including pp. 12 to 225 (fig. 66, transverse section through upper end of pons and inferior colliculi). One would be forced to read practically the entire book in order to study this illustration. It is feared that the undergraduate student would be greatly discouraged by such a requirement.

AFFECTIONS OF THE STOMACH. By Burrill B. Crohn, M.D., Associate Attending Physician to the Mt. Sinai Hospital, New York City. Cloth. Price, $10 net. Pp. 902, with 361 illustrations. Philadelphia: W. B. Saunders Company, 1927.

Here is a much desired book on diseases of the stomach. It is practical and unattended by any frills that might represent the author as riding a particular hobby. Proper stress is laid where it should be. There is a concise description of the anatomy and physiology of the stomach, and laboratory, physical and roentgenologic methods of examination. The author leaves little doubt as to his opinion, although he is not loath to give the opinions of others. There are extensive citations from the literature. The author's extensive experience with ulcer reflects itself in the masterly way in which the subject is portrayed. In collaboration with Dr. Berg on the surgical treatment, the author emphasizes the trend of resection replacing gastro-enterostomy as the best way of coping with this difficult subject. With Dr. Kardiner, the nervous disturbances of the stomach are outlined in an understandable fashion. Dr. Samuel J. Goldfarb, together with Dr. Crohn, contribute to the subject of radiography of the stomach in the same excellent manner. The volume as a whole is profusely illustrated with diagrams and colored reproductions.

CLINICAL CASE-TAKING. Supplement to Methods in Medicine. By George R. Herrmann, M.D., Ph.D., Assistant Professor of Medicine, Tulane University. Cloth. Price, $1.50. Pp. 90, with illustrations. St. Louis: C. V. Mosby Company, 1927.

While small, this book describes extensively the methods of eliciting histories and making physical examinations. Its value seems to lie in the fact that every possible symptom can be elicited, if it is there, by following the method of approach suggested. In this complexity, however, its use is limited to the beginner, particularly the intern who has the time to take hours for writing a history. By persistence he will become proficient in envisaging every angle of a clinical case and later find that he can get along without its help.

THE MIND AND ITS MECHANISM: With Special Reference to Ideo-Motor Action, Hypnosis, Habit and Instinct, and the Lamarckian Theory of Evolution. By Paul Bousfield, M.R.C.S., L.R.C.P., and W. R. Bousfield, K.C., F.R.S. Cloth. Price, $4. Pp. 224. New York: E. P. Dutton & Company, 1927.

The mechanism of mental activity has long puzzled scientists and yielded little more than many tempting, though unproved, theories. This essay presents an unusual point of view. The authors formulate the hypothesis that there is an immaterial structure interposed between the material brain and the mind. This intangible, intermediate brain or "psychic organ" is made of psychoplasm, the psychic equivalent of protoplasm. The ultimate constituent particles, the "psychons," are immeasurably smaller than electrons or protons. The mind of man is, according to this theory, made up of two correlated sets of mechanisms, the material brain with its machinery for receiving sensory impressions, and the psychic brain adapted to synthesize these impressions with psychograms from the memory and present them in consciousness. This hypothesis, with its supporting evidence, may interest physiologists, psychologists and biologists.

EL PSICO-ANÁLISIS. Por el Dr. Emilio Mira. Paper. Price, 4 Ptas. Pp. 162. Barcelona: Arnau de Vilanova. 1927.

Dr. Mira reviews the freudian principles of psychoanalysis, of the libido, and of the interpretation of dreams. The modifications of the libido by Jung and Adler are given. Six tables are included, illustrating the different types of word stimuli used in the technic of psychoanalysis.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

THE PNEUMOTHORAX AND SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS. By Clive Riviere, M.D., F.R.C.P., Physician, City of London Hospital for Diseases of the Heart and Lungs. Second edition. Cloth. Price, $3.25. Pp. 311, with 16 illustrations. New York: Oxford University Press, 1927.

New edition of a special work of well merited popularity.

BACTERIOLOGY AND SURGERY OF CHRONIC ARTHRITIS AND RHEUMATISM WITH END-RESULTS OF TREATMENT. By H. Warren Crowe, D.M., B.Ch., M.R.C.S., and Herbert Frankling, C.B.E., M.R.C.S. Cloth. Price, $9. Pp. 187, with illustrations. New York: Oxford University Press, 1927.

Record of special research on arthritis with handsome illustrations.

CLINICAL RESEARCHES IN ACUTE ABDOMINAL DISEASE. By Zachary Cope, B.A., M.D., M.S., Senior Surgeon to Out-Patients, St. Mary's Hospital. Second edition. Cloth. Price, $3.50. Pp. 214, with 44 illustrations. New York: Oxford University Press, 1927.

Companion book to author's special volume on "The Acute Abdomen."

MEDICAL INSURANCE EXAMINATION: Modern Methods and Rating of Lives for Medical Practitioners and Insurance Officials. By J. Paterson MacLaren, M.A., B.Sc., M.B. Cloth. Price, $5.75. Pp. 312, with illustrations. New York: William Wood & Company, 1927.

Technic of insurance examinations and their interpretation.

GROWING UP. The Story of How We Become Alive, Are Born and Grow Up. By Karl de Schweinitz. Cloth. Price, $1.75. Pp. 111, with illustrations. New York: Macmillan Company, 1928.

Beautifully printed story of generation and reproduction.

SHAKEN BY THE WIND. A Story of Fanaticism. By Ray Strachey. Cloth. Price, $2.50. Pp. 317. New York: Macmillan Company, 1928.

Poorly written novel dealing intimately with the psychology of evangelism and conviction.

DIAGNOSIS AND TREATMENT IN DISEASES OF THE LUNGS. By Frank E. Tylecote, M.D., D.P.H., F.R.C.P., Honorary Physician to the Manchester Royal Infirmary, and George Fletcher, M.A., M.D., M.R.C.P., Assistant Tuberculosis Officer, Lancashire County Council. Cloth. Price, $2.25. Pp. 270. New York: Oxford University Press, 1927.

RECENT ADVANCES IN TROPICAL MEDICINE. By Sir Leonard Rogers, C.I.E., M.D., B.S., Physician and Lecturer, London School of Tropical Medicine. Cloth. Price, $3.50. Pp. 398, with 12 illustrations. Philadelphia: P. Blakiston's Sons & Company, 1928.

QUESTIONS PHYSIOLOGIQUES D'ACTUALITÉ. Par Léon Binet, professeur agrégé de physiologie à la Faculté de médecine de Paris. Paper. Price, 18 francs. Pp. 226, with 55 illustrations. Paris: Masson & Cie, 1927.

EUROPEAN SPORTING ACTIVITIES, AMSTERDAM-COLOGNE. Edited by Karl Kiesel and Walter Hulek. Paper. Pp. 158, with illustrations. Bremen: University Travel Department of the North German Lloyd, 1928.

THIRD ANNUAL REPORT OF THE PASTEUR INSTITUTE, CALCUTTA FOR THE YEAR 1926. Government of Bengal, School of Tropical Medicine and Hygiene. Paper. Price, 1s. 9d. net. Pp. 18. Calcutta, 1927.

PRÉCIS DE PARASITOLOGIE. Par E. Brumpt, professeur à la Faculté de médecine de Paris. Fourth edition. Cloth. Price, 100 francs. Pp. 1452, with 800 illustrations. Paris: Masson & Cie, 1927.

PUBLIC HEALTH STATUTES: 1927 SUPPLEMENT. Acts of the 1927 General Assembly Relating to Public Health. Paper. Pp. 80. Hartford: Connecticut State Department of Health, 1928.

SPRAY PAINTING IN PENNSYLVANIA. Commonwealth of Pennsylvania. Department of Labor and Industry. Special Bulletin No. 16. Paper. Pp. 202, with illustrations. Harrisburg, 1926.

ANNUAL REPORT OF THE FRENCH BENEVOLENT SOCIETY OF NEW YORK FOR THE YEAR ENDING SEPTEMBER 30, 1927. Paper. Pp. 116, with illustrations. New York, 1927.

REPORT OF THE REGISTRAR GENERAL, BOARD OF HEALTH OF THE TERRITORY OF HAWAII, BUREAU OF VITAL STATISTICS FOR THE FISCAL YEAR ENDED JUNE 30, 1927. Paper. Pp. 115. Honolulu, 1927.

MEMORIA ANUAL, CORRESPONDIENTE A 1926. Paper. Pp. 78, with illustrations. Buenos Aires: Instituto de Medicina Experimental, 1927.

Medicolegal

Injury to Eye Resulting in Cataract and Loss of Lens

(Gigleo v. Dorfman & Kimiavsky et al. (Conn.), 138 Atl. R. 448)

The Supreme Court of Errors of Connecticut says that the compensation commissioner found that the claimant in this proceeding under the workmen's compensation act received an injury arising out of and in the course of his employment, his left eye being pierced by a nail. As a result of the injury, a traumatic cataract developed in the eye and was removed by an operation, which also required the removal of the lens of the eye. In addition to compensation of $21 a week for the period of total incapacity, the commissioner decided that the specific injury should be compensated for at $21 a week for 104 weeks for the reduction in the injured eye to 10 per cent or less of normal vision with glasses. The commissioner found that by using a glass made for that purpose the claimant could get 20/30's vision in the injured eye, which is a loss of about 7 or 8 per cent of its normal vision. On motion to have the meaning of the terms "20/30's vision" and "binocular vision," as shown by the medical testimony, added to the finding, the following addition is made: The term "20/30's" with reference to eye vision means that the claimant, with correcting lenses, can read a line at 20 feet that he should normally read at 30 feet. "Binocular vision" means that the images found by each eye separately overlap in the brain and are perceived as a single image. It is the ability to fuse, in a plane, perception in each eye. There is an image formed in the macula, the most sensitive and important part of the retina, in each eye, and if the eyes diverge, for example, if the individual has paralysis of one muscle, he perceives two images where there is only one, because he is not able to overlap the two images in the brain; he no longer has binocular vision.

Two paragraphs of the commissioner's findings stated: (8) That the claimant could not use the uninjured eye and the injured eye with the glass at the same time. (11) That with any pair of glasses which gave the claimant more than one tenth of vision in the injured eye he could not use the two eyes at the same time, so that he was at all times, for practical purposes, a one-eyed man. He must always dissociate the vision of the two eyes. For those two paragraphs the following should be substituted:

(8) While he cannot use the eyes together, he probably does associate the two eyes. He has 20/30's vision in the injured eye. Reading is a different matter; that is a matter of focus.

(11) He has lost binocular or stereoscopic vision, but there are people without injury who use both eyes single, and so do not have actual stereoscopic vision. This man probably uses both eyes, with things on one side, and for things on the other side of his field of vision he uses them separately. The eye is not useless, for there are several other uses for the eye besides binocular vision; e. g., the field of vision—seeing objects from the side—and color vision. He can still use the eye for these purposes. If he lost the injured eye, he would still have the use of the uninjured one; and if he lost the uninjured one, he would not be blind and could still follow a useful occupation.

The statement of a physician as to the discussion and conclusions at a meeting of certain members of the state medical association was not such a subordinate fact as to justify inclusion in the finding.

The loss of the lens was a "loss of a substantial part" of the eye, within the meaning of section 5352 of the general statutes, and an award might therefore properly be made within the terms of that provision, and based on a correct finding of the operative facts. This court cannot take the view that the eye was worse than useless.

The requirement that the compensation be based on the injury to one eye only raises a question essentially medical, and it is certainly not free from difficulty. The functions of one eye must be differentiated from those of the two eyes acting in conjunction. The injury is to one eye only, and it becomes necessary, the Connecticut statute provisions being what they are, to define the functions of that one eye, and estimate the loss, or the extent of the loss of each of those uses, which the injury has caused. Among these uses there should be considered the part which one eye plays in giving field vision, color vision and binocular vision which the claimant enjoyed before the injury. The commissioner's conclusion will necessarily be based on expert medical evidence, and that evidence should be given with this distinction clearly in mind. There are certain conditions which naturally have their bearing on the result, such as liability that the other eye may sometime be lost, rendering the value of the defective eye something quite different from its present value. A question of this nature should be presented with the greatest possible care, to the end that the commissioner may be able to find with clearness and in sufficient detail the facts from the medical opinions, together with the grounds on which the opinions rest.

Procedure in Illinois After Revocation of License

(Carter v. Shelton, Director of Department of Registration and Education, et al. (Ill.), 158 N. E. R. 126)

The Supreme Court of Illinois says that the department of registration and education revoked the license of Dr. Carter as a physician and surgeon, June 21, 1926. He sued out a writ of certiorari from the superior court of Cook County to review the order, and that court entered an order suspending the operation of the revocation during the pendency of the writ. December 4, the cause was heard, and the court set aside its order of suspension and dismissed the writ of certiorari. December 22, Dr. Carter filed a praecipe for a writ of error with the clerk of the supreme court, and a writ of error and scire facias were issued, returnable to the February term. No order of the court was made for the issue of the writ, or was asked for. The medical practice act provides in section 17 (Smith-Hurd Rev. St. 1925, c. 91, sec. 16b) for the procedure in cases of revocation or suspending of licenses. Paragraph (b) provides that the suspension or revocation of a license may be reviewed by the circuit court or the superior court of Cook County by writ of certiorari, and paragraph (c) that judgments and orders of such court "shall be reviewed only by the supreme court and only upon writ of error, which the supreme court in its discretion may order to issue only upon showing of probable error if applied for not later than the second day of the first term of the supreme court following the rendition of the judgment or order sought to be reviewed, but if the first day of said term is less than thirty days from the rendition of said judgment or order then application for said writ of error may be made not later than the second day of the second term following rendition thereof, but not otherwise." Since no application was made to the court for the issue of the writ, it was improvidently issued, and the court was without jurisdiction in the cause. The writ of error was therefore dismissed.

Action Under Death by Wrongful Act Statute

(Stejskal v. Darrow (N. D.), 215 N. W. R. 83)

The Supreme Court of North Dakota says that this was an action for damages which the plaintiff claimed, under the death by wrongful act statute, for the death of an adult unmarried daughter. At about 5 p. m. on a Thursday, the defendant, a practicing physician, took the plaintiff's daughter to a hospital and tried to make arrangements to have her received at the hospital. She was then apparently very ill and suffering great pain. The defendant told the hospital authorities that he believed that she had had a miscarriage. The hospital was unable to receive her, but the defendant was advised that one of the other hospitals would. The defendant then left with the patient and returned to his office. He remained with her in his office until Sunday night. He put her on the office couch and covered her with an army blanket. The woman was very ill, but he did not administer treatment save to give her a little water. On Sunday night she was unconscious, and he thought nothing could be done for her so he left her there and went home. When he returned on Monday morning he found her dead. A necropsy disclosed that the cause of her death was peritonitis, hemorrhage, and shock brought about by a rupture of the uterus. The rupture was due to instrumental inter-

ference with pregnancy. She had been about three months pregnant. No evidence was offered on behalf of the defendant. The jury by its special verdict found that the woman had gone to the defendant for treatment and that he had so negligently treated and cared for her that death resulted.

The supreme court thinks that the record fully sustained the findings of the jury respecting the death of the woman and the cause thereof. Regardless of whether the defendant performed the operation on her, which the testimony unquestionably showed was performed by some one, it clearly appeared that immediately before or after it was performed she sought professional treatment of the defendant, and that thereafter she remained in his care until her death. It was equally clear that the defendant was guilty of the grossest negligence in the care given and the treatment administered to her, and that the jury was well justified in finding that her death resulted as a consequence of this negligence.

The defendant urged that the woman was over age (30 years old); that she was under no obligation to furnish work or services to the plaintiff; that the plaintiff was well-to-do and not dependent on her; that in any event the extent and value of such work and services as the plaintiff might receive from his daughter were altogether conjectural and speculative. But the court is of the opinion that the evidence was sufficient to sustain the finding of the jury that the plaintiff suffered injury on account of the death of his daughter by way of loss of work and services which he was reasonably entitled to expect to receive from her in the amount of $3,000. In such an action as this he was also entitled to recover on account of the reasonable and proper funeral expenses incurred and paid by him. But in an action for damages for death by wrongful act, a father cannot recover on account of loss of the society and companionship of an adult unmarried daughter.

Finding of Total Incapacity from Diabetes Set Aside

(Texas Indemnity Ins. Co. v. James (Texas), 297 S. W. R. 254)

The Court of Civil Appeals of Texas says that the plaintiff brought this suit to set aside an award of the industrial accident board in favor of the defendant, who was an employee of a pipe line company that carried insurance with the plaintiff, and who was injured in the course of his employment. It was undisputed that the defendant was suffering from diabetes, and that before the injury he had not been thus afflicted. The plaintiff's assignments attacking the submission of the issue of total incapacity and the finding of the jury that the defendant was totally incapacitated are overruled. The evidence raised the issue, and this court thinks that it was sufficient to support the finding of total incapacity at the time of the trial. It was sufficient, also, to show that the defendant's diabetic condition was caused by the injury.

But assignments challenging the submission of the issue of permanent total incapacity and the sufficiency of the evidence to support the jury's finding of permanent total incapacity are sustained. Several physicians testified, all of them at the instance of the defendant, and none of them testified that his total incapacity was permanent—there was no testimony to that effect. It was true that all of the physicians testified that the defendant had diabetes, and that diabetes was regarded as incurable, but they also testified that when diabetes is treated with insulin and the patient put on proper diet, the disease quickly yields to the treatment and the patient usually became as normal as most people. The defendant admitted that he had been advised by the physicians that he had diabetes, but that he had not been treated for the malady because, he said, he was not financially able to do so. However, if the issue of permanent total incapacity could be said to have been raised by the evidence, then, in the opinion of this court, the finding of the jury of permanent total incapacity was so against the weight of the evidence as to be wrong and could not be allowed to stand. All the evidence was to the effect that, when diabetes is treated with insulin and the patient put on proper diet, relief followed, and the person was restored to a normal condition. In this state of the evidence the finding of permanent total incapacity must be set aside. While total incapacity may exist at the time of the trial, and the circumstances may indicate that it will continue for 401 weeks, yet it may not be permanent, that is, unchanging or never ending; the proof should show the incapacity to be total and permanent.

Society Proceedings

COMING MEETINGS

Alabama, Medical Association of the State of, Birmingham, April 17-20. Dr. D. L. Cannon, 519 Dexter Avenue, Montgomery, Secretary.

American Association for Thoracic Surgery, Washington, D. C., April 30-May 2. Dr. Ethan Flagg Butler, Sayre, Pa., Secretary.

American Association of Anatomists, Ann Arbor, Mich., April 5-7. Dr. Lewis H. Weed, Johns Hopkins Medical School, Baltimore, Secretary.

American Association of Genito-Urinary Surgeons, Washington, D. C., April 30-May 2. Dr. H. L. Kretschmer, 122 S. Michigan Avenue, Chicago, Secretary.

American Association of Pathologists and Bacteriologists, Washington, D. C., May 1-2. Dr. H. T. Karsner, 2109 Adelbert Road, Cleveland, Secretary.

American Bronchoscopic Society, Washington, D. C., April 30. Dr. Louis H. Clerf, 128 South 10th Street, Philadelphia, Secretary.

American Climatological and Clinical Association, Washington, D. C., May 1-2. Dr. A. K. Stone, Auburn Street, Framingham Center, Mass., Secretary.

American Dermatological Association, Washington, D. C. April 30-May 2. Dr. C. Guy Lane, 416 Marlborough Street, Boston, Secretary.

American Gastro-Enterological Association, Washington, D. C., April 30-May 1. Dr. W. J. Mallory, 1720 Connecticut Avenue, N. W., Washington, D. C., Secretary.

American Gynecological Society, Washington, D. C., April 30-May 2. Dr. Floyd E. Keene, Medical Arts Building, Philadelphia, Secretary.

American Laryngological Association, Washington, D. C., May 1-3. Dr. G. M. Coates, 1721 Pine Street, Philadelphia, Secretary.

American Laryngological, Rhinological and Otological Society, Washington, D. C., May 3-5. Dr. R. L. Loughran, 33 East 63d Street, New York, Secretary.

American Ophthalmological Society, Washington, D. C., April 30-May 2. Dr. Emory Hill, Professional Building, Richmond, Va., Secretary.

American Otological Society, Washington, D. C., April 30-May 1. Dr. T. J. Harris, 104 East 40th Street, New York, Secretary.

American Pediatric Society, Washington, D. C., April 30-May 2. Dr. H. C. Carpenter, 1805 Spruce Street, Philadelphia, Secretary.

American Pharmacological Society, Ann Arbor, Mich., April 12-14. Dr. E. D. Brown, University of Minnesota, Minneapolis, Secretary.

American Physiological Society, Ann Arbor, Mich., April 12-14. Dr. W. J. Meek, Science Hall, University of Wisconsin, Madison, Secretary.

American Society of Biological Chemistry, Ann Arbor, Mich., April 12-14. Dr. D. W. Wilson, University of Pennsylvania Medical School, Philadelphia, Secretary.

American Society of Clinical Investigation, Washington, D. C., April 30. Dr. J. T. Wearn, Boston City Hospital, Boston, Secretary.

American Society of Tropical Medicine, Washington, D. C., May 1-2. Dr. Benjamin Schwartz, P. O. Box 131, Pennsylvania Avenue Station, Washington, D. C., Secretary.

American Surgical Association, Washington, D. C., April 30-May 2. Dr. Lincoln Davis, 205 Beacon Street, Boston, Secretary.

Arizona State Medical Association, Tucson, April 19-21. Dr. D. F. Harbridge, Goodrich Building, Phoenix, Secretary.

Arkansas Medical Society, El Dorado, May 1-3. Dr. W. R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Association of American Physicians, Washington, D. C., May 1-3. Dr. J. H. Means, Massachusetts General Hospital, Boston, Secretary.

California Medical Association, Sacramento, April 30-May 3. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.

Congress of Physicians and Surgeons of North America, Washington, D. C., May 1-2. Dr. W. R. Steiner, 646 Asylum Avenue, Hartford, Conn., Secretary.

Federation of American Societies for Experimental Biology, Ann Arbor, Mich., April 12-14. Dr. E. D. Brown, University of Minnesota, Minneapolis, Secretary.

Florida Medical Association, Tampa, April 3-4. Dr. Shaler Richardson, 111 West Adams Street, Jacksonville, Secretary.

Georgia, Medical Association of, Savannah, May 9-11. Dr. A. H. Bunce, 139 Forrest Avenue, N. E., Atlanta, Secretary.

Illinois State Medical Society, Chicago, May 8-11. Dr. Harold M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Cedar Rapids, May 9-11. Dr. Tom B. Throckmorton, Bankers Trust Building, Des Moines, Secretary.

Kansas Medical Society, Wichita, May 8-10. Dr. J. F. Hassig, 804 Huron Building, Kansas City, Secretary.

Louisiana State Medical Society, Baton Rouge, April 10-12. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 24-26. Dr. John T. King, Jr., 1211 Cathedral Street, Baltimore, Secretary.

Mississippi State Medical Association, Meridian, May 8-10. Dr. T. M. Dye, Clarksdale, Secretary.

New Mexico Medical Society, Albuquerque, May 10-11. Dr. L. B. Cohenour, 219 West Central Avenue, Albuquerque, Secretary.

North Carolina, Medical Society of the State of, Pinehurst, April 30-May 2. Dr. L. B. McBrayer, Southern Pines, Secretary.

Ohio State Medical Association, Cincinnati, May 1-3. Mr. Don K. Martin, 131 East State Street, Columbus, Executive Secretary.

Pacific Coast Oto-Ophthalmological Society, Santa Barbara, April 18-20. Dr. Walter F. Hoffman, 817 Summit Avenue, Seattle, Secretary.

South Carolina Medical Association, Columbia, April 17-19. Dr. E. A. Hines, Seneca, Secretary.

Tennessee State Medical Association, Nashville, April 10-12. Dr. H. H. Shoulders, Lambuth Building, Nashville, Secretary.

Texas, State Medical Association of, Galveston, May 8-10. Dr. Holman Taylor, Medical Arts Building, Fort Worth, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Pathology, Boston

4: 1-90 (Jan.) 1928

Pathology of Bilharziasis. H. S. Hutchison, Tanta, Egypt.—p. 1.
*Roentgenographic Study of Circulation in Normal and Pathologic Kidney. R. S. Graham, Philadelphia.—p. 17.
*Etiology and Pathology of Cystic Pyelitis, Cystic Ureteritis and Cystic Cystitis. H. D. Morse, Rochester, Minn.—p. 33.
*Malignant Tumor Simulating Bone Marrow. S. Warren, Boston.—p. 51.
*Ectopic Chorionepithelioma. E. de Zalka, Budapest, Hungary.—p. 59.
Muscle Hemoglobin in Human Autopsy Material. W. W. Woodruff and G. H. Whipple, Rochester, N. Y.—p. 75.
Epithelial Cyst of Hypophysis. M. Fulstow, Boston.—p. 87.

Roentgenographic Study of Circulation of Kidney.—Graham finds that the injection of the renal vessels with a radiopaque suspension, and subsequent roentgenography of the kidney, have proved the accepted anatomic conception of the arterial tree in the normal kidney to be correct. Such examination is of definite value in the study of thrombosis of vessels and infarcts. A comparison of the roentgenographic appearance of the arterial tree with the urea nitrogen retention in the blood has failed to show a direct relationship between moderate arteriosclerosis per se and impaired renal function. Acute nephritis, acute degenerative parenchymatous changes in the kidney tissue, and passive congestion have not given a distinctive picture on the roentgenograms.

Etiology of Cysts of Kidney, Ureter and Bladder.—Morse's study fails to reveal evidence to support the secretory theory of the formation of these cysts. They are formed by degeneration of the central cells of the epithelial cell nests.

Malignant Tumor Simulating Bone Marrow.—Warren proposes the name hemocytoblastoma for a tumor resembling bone marrow, apparently primary either in the pelves of the kidneys or in the retroperitoneal fat tissue, which was found in a woman, aged 42, without evidence of leukemic involvement.

Ectopic Chorionepithelioma of Ovary and Liver.—Two cases of ectopic chorionepithelioma are reported by de Zalka, one a primary chorionepithelioma of the ovary, the other of the liver. In the first case no other genital focus existed. Metastatic nodules were found in the skin, lungs, kidneys, liver, pancreas, brain and left temporal bone. In the second case no primary genital tumor was found, and but few and small metastases were observed in the lungs and in the left kidney; the liver, however, was considerably enlarged and contained huge masses of histologically typical chorionepitheliomatous tissue. No teratomatous elements were demonstrable. Both cases are regarded as being ectopic chorionepitheliomas initiated by the transportation in a retrograde manner of chorionic elements through the inferior vena cava.

American Journal of Public Health, New York

18: 1-130 (Jan.) 1928

Has Prohibition Improved Public Health? L. I. Dublin.—p. 1.
*"Common Cold." V. S. Cheney, Chicago.—p. 15.
Relation of Public Health and Clinical Laboratories. T. G. Hull, Springfield, Ill.—p. 33.
Chicago's Tuberculin Testing Program. H. N. Bundesen and H. C. Becker, Chicago.—p. 36.

Cause and Treatment of Common Cold.—Cheney asserts that he has been able to induce all the symptoms of a cold, in varying degree from a simple coryza to that of grip, by the induction of an artificial acidosis through the administration of ammonium and calcium chlorides. The degree of severity of the symptoms was in direct ratio to the degree of acidosis induced. The symptoms rapidly subsided on the administration of sodium bicarbonate in large doses by mouth and by rectum. If the disease is attacked when there is a beginning dryness in the pharynx or a slight coryza, or congestion of the mucous membrane of the nose, and alkalization is instituted by giving 60 grain (4 Gm.) doses of sodium bicarbonate every two hours for three doses, when usually the urine is alkaline to litmus paper, a "cold" can always be aborted. At the time of taking the treatment, the usual meal should be dispensed with or should consist of milk and some cereal, or soup or broth. If the bowels are constipated, they should not be moved by a cathartic or laxative but the lower bowels should be relieved by a soap-suds enema. When a cold has advanced to the stage at which there is a hoarseness and a profuse coryza, or when this condition has advanced to what is generally termed "a cold," Cheney gives an initial dose of 60 grains (4 Gm.) of sodium bicarbonate; 30 grains (2 Gm.) every two hours for six doses, then 20 grains (1.3 Gm.) every three hours during the waking period until the cold is checked. The administration of the sodium bicarbonate should always be in or followed by a large glass of hot water. Locally, he sprays the nose and throat with an alkaline solution, 1 drachm (4 Gm.) of sodium bicarbonate to 1 pint of water, morning and night. If the bowels are constipated, an enema of soap-suds will relieve the lower bowels.

Annals of Internal Medicine, Ann Arbor, Mich.

1: 203-272 (Oct.) 1927

*Insulin and Carbohydrate Tolerance. W. M. Brace, Ann Arbor.—p. 203.
Conservative Treatment of Gangrene Complicating Diabetes. J. E. Harbinson, Woodland, Calif.—p. 212.
*Relation of Trauma to Cardiac Disease. L. A. Levison, Toledo, Ohio.—p. 227.
Basal Blood Pressure in Normal. F. N. Miller, W. Osborne and R. C. Romig, Eugene, Ore.—p. 231.
*Torula Infection in Man. O. Berghausen, Cincinnati.—p. 235.
Roentgen-Ray Treatment of Goiter. G. W. Grier, Pittsburgh.—p. 241.
Aneurysm of Renal Artery. E. Weiss, Philadelphia.—p. 247.
Value of Scholarship. C. G. Heyd, New York.—p. 251.

Insulin and Carbohydrate Tolerance.—Brace concludes that there has been no evidence advanced which shows that the daily administration of insulin over long periods has been followed by a gain in the total dextrose tolerance of a diabetic patient which could not be explained by desugarization or recovery from infection. A failure to obtain evidence of improvement in the tolerance for dextrose in five patients who had received weighed, high fat, low protein and low carbohydrate diets and daily insulin over periods varying from thirty-two to forty-five months has given no ground for believing that insulin is capable of effecting a cure or a partial cure of human diabetes mellitus. Insulin has shown no more ability to arrest the downward progress of the disease than the earlier treatment without the drug. Each of these patients has lost tolerance during the period of treatment with insulin.

Relation of Trauma to Cardiac Disease.—Levison reports the case of a healthy man who sustained a severe crushing of the chest when caught between two trucks. Later he complained of severe pain in the chest and on examination an auricular fibrillation was discovered. The man recovered completely from this condition. Levison is convinced that it was of traumatic origin.

Torula Infection of Tongue.—A case of ulceration of the tongue is reported by Berghausen, in which *Torula histolytica* was isolated from the lesion. The marked skin reaction following the subcutaneous injection of a boiled aqueous extract of a culture of the organism indicates that a state of hypersensitiveness existed. Complications in the form of a mottled infiltration of the parenchyma of the lung and enlargement of the spleen were present. The blood culture was negative. Unfortunately, permission was not granted to perform a necropsy to determine the character of the lesion in the lungs and spleen. At no time was it possible to obtain a specimen of sputum to examine for tubercle bacilli. The patient had never worked in an atmosphere containing dust, so that the changes in the lung cannot be attributed to siderosis. Temporary improvement followed the employment of neoarsphenamine intravenously. Local antiseptic measures in the form of the various dyes, arsphenamine and sodium

perborate were of no avail. The exposure to the roentgen ray and radium was followed by such a reaction that the patient did not care to have these repeated. No improvement followed their use. Quinine sulphate and sodium iodide internally over a prolonged period seemed to be of no benefit. Death was due to inanition, the patient steadily losing in weight and finally refusing food.

1: 367-462 (Dec.) 1927

*Action of Atropine and Calcium and Parathyroid Preparations in Arterial Hypertension. H. O. Altnow, Minneapolis, and J. P. O'Hare, Boston. —p. 367.
Pathologic and Clinical Significance of Congenital One-Sided Kidney Defect, with Presentation of Three New Cases of Agenesia and One of Aplasia. C. H. Fortune, Ann Arbor.—p. 377.
Embryohormonic Relations of Thyroid Gland to Ectodermal Tissues. R. C. Moehlig, Detroit.—p. 400.
Effect of Pituitary Administration on Growing Dogs. W. G. Downs, Jr., Ann Arbor.—p. 412.
Alimentary Canal of Medical Student: Radiographic Studies. T. W. Todd, Cleveland.—p. 420.
*Transfusion in Preoperative and Postoperative Conditions with Anemia. D. D. Stofer, Kansas City, Mo.—p. 422.
Laboratory Service in Civilian Hospitals. H. I. Gosline, Vicksburg, Miss. —p. 429.

Effect of Atropine, Calcium and Parathyroid on Arterial Hypertension.—Altnow and O'Hare treated eleven cases of hypertension with calcium chloride, 1 Gm., and atropine, 0.00025 Gm., four times a day, for from three to four weeks. In six of these cases it had no effect on the blood pressure. In five other cases it might be credited with having some slight effect. Parathyroid extract, 0.0065 Gm. by mouth, was used in three cases of hypertension over a sufficiently long period to obtain its action, without any apparent effect on the blood pressure. Parathyroid extract-Hanson was used in three cases in increasing daily dosage until a maximum of 0.039 Gm. was given, and this dosage was then maintained. No constant immediate effect from the parathyroid was discernible. The small variations that occurred were within normal limits of blood pressure variation. In two of the three cases there did not appear to be any sustained depressor effect on the blood pressure.

Transfusion in Severe Hemorrhage and Shock.—Stofer asserts that transfusion is the most successful means of combating severe hemorrhage or shock yet devised, both preoperative and postoperative. In chronic secondary anemic patients, transfusion undoubtedly makes the patient a better operative risk and its use may be life saving. The indications and limitations for preoperative and postoperative transfusions should be better understood and advantage taken of them more often.

Archives of Dermatology and Syphilology, Chicago

17: 153-292 (Feb.) 1928

*Intracutaneous Method of Treating Argyria. A. W. Stillians and T. K. Lawless, Chicago.—p. 153.
*Lymphogranulomatosis Cutis: Hodgkin's Disease. H. E. Miller, San Francisco.—p. 156.
*Epilation with Thallium Acetate in Treatment of Ringworm of Scalp in Children. B. F. Felden, New York.—p. 182.
Fungi and Fungous Diseases: III. A. Castellani, New Orleans.—p. 194.
Use of "Grenz" (Infraroentgen) Rays in Dermatologic Conditions. J. J. Eller and G. Bucky, New York.—p. 221.

Intracutaneous Method of Treating Argyria.—According to Stillians and Lawless, a mixture containing 0.25 per cent of potassium ferricyanide and 6 per cent of sodium thiosulphate injected intradermally quickly removes the bluish discoloration of argyria.

Lymphogranulomatosis Cutis.—Two cases of lymphogranulomatous infiltrations of the skin are reported by Miller. One patient developed cutaneous nodules three and one-half years after the appearance of a generalized erythroderma that was originally considered pityriasis rubra (Hebra type). The second patient had a universal granulomatous infiltration of the skin that was diagnosed after examination of the microscopic changes in sections of the skin and a lymph node. The observations on a patient with a large cell lymphosarcoma that simulated a mycosis d'emblée or a "chancre de lymphogranulomateux" are presented. A patient with a small cell lymphosarcoma of certain lymph nodes and lymphogranulomatosis of others demonstrates the close relationship between the diseases of this group.

Epilation with Thallium Acetate.—A report of forty-seven children with trichophytosis of the scalp is made by Felden, with thirty-six cures after one administration of thallium acetate by mouth, 0.008 Gm. per kilogram of body weight being given. Epilation usually appears on the eighteenth day, is entirely spontaneous in approximately 50 per cent of the cases, and has to be completed by the extraction of loose hairs with adhesive strips, which is entirely painless. The epilation is not entirely dependable, since there will be cases in which only partial results are obtained. Local treatment, which consists of painting the scalp with 5 per cent tincture of iodine and applying a 10 per cent sulphur ointment daily, should be continued throughout the entire period. Particular attention should be paid to the remaining short, broken off hairs. Patients with a marked discrepancy between weight and age are unfit for pure thallium treatment; the combined method, consisting of one half or two thirds of the dosage of both the roentgen ray and thallium, offers eventually a good outlook. Thallium is strictly to be avoided in full dosage in adults and in children approaching puberty, because of its serious toxicity. Repetition of the thallium intake in less than two months is dangerous and is to be avoided. The thallium should be taken on an empty stomach and should be dissolved in sugar water in the presence of the physician, who must assure himself that undissolved salt does not remain in the glass. Acute infections, which are generally debilitating, and diseases of the kidneys are contraindications to the thallium medication.

Archives of Neurology and Psychiatry, Chicago

19: 201-376 (Feb.) 1928

Rôle of Dorsal Roots in Muscle Tonus. S. W. Ranson, St. Louis.—p. 201.
*Concentric Periaxial Encephalitis. J. Baló, Budapest, Hungary.—p. 242.
*Abscess of Brain. I. B. Diamond and P. Bassoe, Chicago.—p. 265.
Aphasia: Study of Normal Control Cases. G. H. J. Pearson, B. J. Alpers and T. H. Weisenburg, Philadelphia.—p. 281.
Colloidal Gold Reactions with Spinal Fluids Contaminated with Blood. H. G. Mehrtens, H. A. Wyckoff and R. M. Davis, San Francisco.—p. 296.
Analysis of Abnormal Posture of Head in Parkinsonism of Various Origins. W. M. Kraus and N. E. Silverman, New York.—p. 301.
*Sympathetic Paralysis. I. I. Yakovleva, D. K. Bogorodinsky and G. M. Freidovitch, Tashkent, U. S. S. R.—p. 311.
Twenty-Six Normally Possible Forms of Rotationally Induced Nystagmus. J. Favill, Chicago.—p. 318.
Barbital (Veronal) Addiction. P. Work, Denver.—p. 324.
Circumscribed Suppurations of Spinal Cord and Meninges: Case of Subdural Abscess with Functional Recovery Following Operation. A. E. Bennett and J. J. Keegan, Omaha.—p. 329.

Concentric Periaxial Encephalitis.—Baló describes an elective and isolated disease of the cerebral white matter which is characterized by the occurrence of foci varying in size from that of a lentil to that of a pigeon's egg and presenting gray softening and, in a part, concentricity. In these foci the medullary sheaths are destroyed and the axis cylinders remain intact. Proliferation of the neuroglia follows the destruction of the medullary sheaths, and mast glia cells occur which partly undergo degeneration and become the subject of gliophagia. The concentric foci develop in such a manner that degenerated layers alternate with normal layers of white matter. The changes about the vessels indicate the inflammatory character of the process. Syphilis, apparently, does not play a part in the etiology. Bacteriologic examination did not reveal any micro-organisms. Intracerebral inoculation with material from the brain into rabbits did not transmit the disease. One would infer from this that the causative agent is a lecithinolytic ferment that exercises its action from different foci at different intervals. Among the diseases of the brain known to date, the condition in the case reported resembles acute multiple sclerosis and the encephalitis periaxialis diffusa of Schilder. The disease differs from encephalitis periaxialis diffusa because of its focal character. It differs from multiple sclerosis because in that condition both the brain and the spinal cord and both the gray and the white matter are affected. The case reported resembles most the case of Barré, Morin, Draganesco and Reys and the third case of Marburg described in his work on acute multiple

sclerosis. Baló suggests that the term leukoencephalitis periaxialis concentrica be used to designate the pathologic conditions described by him.

Abscess of Brain.—In one of the two cases reported by Diamond and Bassoe, the clinical picture resembled that of epidemic encephalitis; in the other, that of tumor of the brain.

Sympathetic Paralysis. — Two cases are reported by Yakovleva et al. In the first case, that of a healthy person, the blood pressure, the type of capillaries, the viscosity, the clotting and the blood sugar were equal in the arm and in the leg. This is an instance of complete isotonia. In the second case, a transverse injury of the spinal cord, definite changes were noted. In the somatic sphere this patient had a paraplegia; in the sympathetic sphere he had a parahypertonia, a parahyperglycemia, etc. The distribution of the symptoms is correspondingly similar.

Boston Medical and Surgical Journal

197: 1439-1486 (Feb. 2) 1928

Clinical Observations on "Well" Patients. R. Fitz, Boston.—p. 1439.
Two Weeks' Course for Commanding Officers and Executives, Medical Field Service School, Carlisle Barracks, Pa. L. S. Medalia, Boston. —p. 1444.
Intracranial Hemorrhage of New-Born: Relation to Hemorrhagic Diathesis. B. Burpee, Manchester, N. H.—p. 1449.

Endocrinology, Los Angeles

11: 497-612 (Nov.-Dec.) 1927

*Carbohydrate Metabolism in Hyperthyroidism. H. J. John, Cleveland. —p. 497.
Pathology of Goiter. A. E. Hertzler, Halstead, Kan.—p. 582.
*Addison's Disease Without Pigmentation. D. G. Ghrist and L. G. Rowntree, Rochester, Minn.—p. 589.
Case of Physiologic Castration in Fowl. H. B. Yocom and J. B. Flynn, Portland, Ore.—p. 593.

Carbohydrate Metabolism in Hyperthyroidism.—A report is made by John of a study of the carbohydrate metabolism in ninety-two cases, together with a discussion of the pertinent literature. He says that there is no dextrose tolerance curve specific for hyperthyroidism. That is, a definitely diabetic type of curve may be present in a mild case of hyperthyroidism and a normal curve may be present in a very severe case of hyperthyroidism. Thyroidectomy lowers the total metabolism and in consequence improves the carbohydrate tolerance. In cases in which little or no improvement follows thyroidectomy, this is due to the fact that lack of proper diabetic treatment or insufficient treatment has followed the operation. If diabetes develops after a thyroidectomy, this is due either to other extraneous factors such as produce diabetes in other cases or to the fact that an insufficient amount of thyroid tissue has been removed. In the latter case, when more of the gland is removed the diabetes is improved. John believes that hyperthyroidism plays a fundamental etiologic rôle in the disturbances of endocrine equilibrium which constitute the diabetic syndrome. Glycosuria and hyperglycemia (either fasting or, more often, two and one-half hours after a meal) are not uncommonly present in hyperthyroidism. The presence of hyperglycemia two and one-half or more hours after a meal is an expression of an insufficient insulogenic function. The intervention of the menopause in a case of hyperthyroidism may cause hypertrophy of the islands of Langerhans with the resultant cure of a coincident diabetes. The glycogen depletion of hyperthyroidism increases the tendency to acidosis. Patients with hyperthyroidism in whom a frank diabetic condition of severe type is not present, but merely a mild degree of disturbance of the carbohydrate metabolism, John considers to be "functional" diabetics. The administration of thyroid preparations is not without danger. It may precipitate hyperthyroidism, and may even produce diabetes. In John's series of 100 dextrose tolerance tests in eighty-two cases of hyperthyroidism and ten cases of colloid goiter, fasting glycosuria was present in nineteen cases and absent in eighty-one cases. Sixty-six per cent of the curves indicate an impaired tolerance, and 34 per cent indicate a normal tolerance. From these observations it would appear that the renal permeability is increased in the active stage of hyperthyroidism. The renal threshold for dextrose was below 120 in 35.6 per cent of the cases.

Addison's Disease Without Pigmentation.—Ghrist and Rowntree report a case of Addison's disease resulting from tuberculosis of the suprarenals in which the clinical course was typical in every respect, except for the absence of pigmentation. The course was rapidly and continuously downward. The patient was not benefited by epinephrine and suprarenal cortex but appeared, in fact, intolerant to them. The diagnosis was made clinically and was confirmed by pathologic examination. This case represents the first instance of Addison's disease without pigmentation confirmed pathologically in the Mayo Clinic, although more than seventy cases of Addison's disease have been observed.

Journal of Cancer Research, Lancaster, Pa.

11: 217-299 (Oct.) 1927

*Gye's Hypothesis on Etiology of Malignant Tumors. J. A. Kolmer and M. J. Harkins, Philadelphia.—p. 217.
*Relation of Plasma Sodium Content of Mice to Their Susceptibility to Inoculable Tumor. E. E. Jones and M. D. Rourke.—p. 232.
Problem of Cellular Anarchy: B. Sokoloff.—p. 246.
Biologic Measure of Roentgen-Ray Dosage. C. Packard, New York.—p. 282.
Effect of Absorption on Relation Between Exposure and Biologic Effect of Radiation. H. M. Terrill, New York.—p. 293.

Etiology of Malignant New Growths.—The results obtained by Kolmer and Harkins in this study are interpreted as failing to confirm Gye's hypothesis on the etiology of malignant new growths.

Relation of Plasma Sodium Content to Susceptibility to Tumor.—The sodium content of the plasma of a 100 per cent susceptible and of two 100 per cent nonsusceptible strains of mice was determined by Jones and Rourke in order to discover whether there existed normally any difference in this respect between the strains which might play a part in determining susceptibility or nonsusceptibility to a particular inoculable tumor. The results were negative. The genetic factors for susceptibility are not expressed in the sodium content of the plasma.

Journal of Experimental Medicine, Baltimore

47: 185-343 (Feb. 1) 1928

*Influence of Suprarenal Glands on Resistance: III. Susceptibility to Histamine as Test of Suprarenal Deficiency. W. J. M. Scott, Rochester, N. Y.—p. 185.
*Common Cold: II. Study of Certain Gram-Negative Filter-Passing Anaerobes of Upper Respiratory Tract. K. C. Mills, G. S. Shibley and A. R. Dochez, New York.—p. 193.
Paratyphoid Infection in Guinea-Pigs: IV. Course of Second Type of Salmonella Infection Naturally Appearing in Endemic Stage. J. B. Nelson, Princeton, N. J.—p. 207.
*Etiology of Oroya Fever: X. H. Noguchi, New York.—p. 219.
*Id.: XI. Comparison of Bartonella Bacilliformis and Bartonella Muris. Cultivation of Bacterium Murium, N. Sp. H. Noguchi, New York. —p. 235.
Effect of Subsequent Agglutination of Exposure of Bacteria to Heated Antiserum. F. S. Jones, New York.—p. 245.
Comparison of Spirochete of Yellow Fever (Leptospira Icteroides Noguchi) with Leptospira of Weil's Disease. E. Martini, Bogota, Colombia, South America.—p. 255.
Rôle of Reticulo-Endothelial System in Immunity: V. Phenomena of Passive Immunity in Blocked and Splenectomized Mice. C. W. Jungeblut, New York.—p. 261.
*Extent of Capillary Bed of Heart. J. T. Wearn, Boston.—p. 273.
*Rôle of Thebesian Vessels in Circulation of Heart. J. T. Wearn, Boston.—p. 293.
Study of Mechanism of Recovery from Experimental Pneumococcus Infection. O. H. Robertson, S. T. Woo, S. Nan Cheer and L. P. King, Peking, China.—p. 317.

Influence of Suprarenal Glands on Resistance.—The fact that the resistance of rats to histamine is greatly diminished after suprarenalectomy leads Scott to propose this susceptibility as a functional test for deficient suprarenal cortex function.

Etiology of Common Cold.—A study of the gram-negative, filter-passing anaerobic organisms, described by Olitsky and Gates, and Gates and McCartney, was undertaken by Mills et al. with a view to determining their general character and their possible rôle in the causation of the common cold. They conclude that these organisms seem to constitute part of the normal flora of the upper respiratory tract and would seem to bear no etiologic relationship to the common cold.

Etiology of Oroya Fever.—Nine strains of *Bartonella bacilliformis* have been isolated by Noguchi from nine of twelve

specimens of blood withdrawn from patients with verruga. Morphologically the strains differed very little in fresh preparations examined by dark ground illumination. In stained preparations some strains appeared coarser, others finer than the average. More striking variations are found in the virulence of the different strains for the monkey *(Macacus rhesus)*. Most of the severe cases yielded virulent strains, while some of the strains from benign verruga were nonpathogenic. It appears highly probable that the severe form of Carrion's disease is, in general, caused by a virulent strain, while the benign forms are due to a strain of low virulence. On the other hand, a virulent strain may cause benign verruga in unusually resistant persons and a weak strain may give rise to severe blood infection in unduly susceptible individuals. An interesting phenomenon brought out by the present investigation was the failure of the nine human blood specimens to induce local verruga in the same monkeys in which the corresponding cultures, inoculated simultaneously at separate sites, gave rise to typical lesions. Yet the original blood samples were shown by cultivation to have contained live bartonellas at the time they were inoculated, and blood culture revealed the presence of the micro-organisms in the blood of monkeys which showed no other signs of infection after inoculation with the human blood. The strains isolated showed similar serologic properties, as tested by complement fixation.

Experimental Acute Orchitis.—Noguchi describes an organism which induced in the testes of normal rats an acute orchitis such as resulted from inoculation of the blood or liver suspensions of splenectomized rats. In morphologic features the cultural forms of the micro-organism isolated resemble *B. muris*. The organism found in the testicular tissues, however, is considerably coarser than *B. muris* and takes a deeper stain. Immunologic study failed to settle the question of the relation between *B. muris* and the cultivated organism, which is provisionally called *Bacterium murium*.

Extent of Capillary Bed of Heart.—Wearn has been able to determine the number of capillaries in the normal heart muscle. This study has shown a very rich blood supply with an average of approximately one capillary for each muscle fiber in the ventricular walls and papillary muscles, and a less abundant supply in the auricular muscle and Purkinje system. Capillaries were not found constantly in the valves of hearts in which there was apparently a complete injection of the capillary bed.

Rôle of Thebesian Vessels in Circulation of Heart.—Evidence is presented by Wearn to show a direct connection other than through the capillaries between the coronary arteries and the chambers of the heart. This connection was shown by perfusion, injections and serial sections to be through the thebesian veins. Communications between the larger coronary veins and the thebesian veins were also demonstrated by the same methods. In the event of gradual closure of the orifices of the coronary arteries, the thebesian vessels can supply the heart muscle with sufficient blood to enable it to maintain an efficient circulation.

Journal of Laboratory & Clin. Medicine, St. Louis

13: 303-404 (Jan.) 1928

*Blood Picture in Purpura. N. Rosenthal, New York.—p. 303.
*Anemia as Factor in Sedimentation Time of Erythrocytes. R. S. Hubbard and H. B. Geiger, Clifton Springs, N. Y.—p. 322.
*Sedimentation of Erythocytes. H. F. Hunt, Rochester, Minn.—p. 327.
*Microscopic Slide Precipitation Test for Syphilis. F. B. Johnson, Charleston, S. C.—p. 334.
*Comparison of Kolmer and Kahn Tests for Syphilis. C. E. Roderick, F. S. Salisbury and C. G. Cates, Camp Custer, Mich.—p. 338.
*Fatalities Following Use of Arsphenamine. E. Scott and R. A. Moore, Columbus, Ohio.—p. 345.
Cytologic Key to Diagnosis and Prognosis of Neoplasms. W. C. MacCarty, Rochester, Minn.—p. 354.
*Differential Blood Counts: Comparison of Accuracy Obtained by Various Methods. D. N. Beacom, Denver.—p. 366.
Pathologic Laboratory Examinations for Dentist. C. G. Darlington, New York.—p. 376.
Turbidimetric Methods for Sugar in Blood and Urine. A. R. Rose, Newark, N. J.—p. 382.

Blood Picture in Purpura.—Rosenthal studied the blood picture in various types of blood diseases accompanied by purpura. He divides these purpuras into three main groups: (1) purpura characterized by a diminution of the blood platelets with or without alteration of their functions; (2) purpura due to some change in the function of the platelets without a diminution of their number; (3) purpura due to changes in capillaries. The blood picture in the first is diagnostic in cases of acute and chronic thrombocytopenic purpura, acute and chronic aplastic anemias and symptomatic thrombocytopenic purpura. The second group, chronic hereditary thrombasthenic purpura, is rare. The third main group is purpura due to conditions which affect the capillaries. A classification is presented as a result of a systematic study of 172 cases showing purpura as a primary or secondary symptom.

Relation of Anemia to Sedimentation Rate of Erythrocytes.—Hubbard and Geiger believe that there is a distinct relationship between the rate of sedimentation of erythrocytes on the one hand and their concentration in the blood on the other. Rather small variations from normal blood counts may apparently produce quite marked differences in the sedimentation rate as usually measured. When the sedimentation time is used clinically, this fact should be kept in mind, for other factors cause marked deviations from the normal, and it is in these other factors that the clinician is primarily interested in his application of the test.

Estimation of Sedimentation Rate of Erythrocytes.—Hunt has devised a method, based on the work of Gilbert, of reporting the sedimentation reaction which would be a combination of time and distance. This is termed the sedimentation index. The sedimentation index is obtained by projecting the line drawn between the plotted point of the first and second hours on a scale drawn as a perpendicular line two squares to the right of the second-hour point or so that the horizontal distance from the first-hour point to the second-hour point is equal to the distance from the second-hour point to the scale. The scale is enumerated with 0 on the horizontal line marked cc., and the integral numbers follow in order downward, each large square representing one unit. The reading is recorded in units and decimals thereof. Thus, a rapid sedimentation rate gives a high sedimentation index. The method differs from Gilbert's chiefly in that he determines the sedimentation index by drawing a straight line from the 0 point paralleling the greatest drop in the curve during the first hour to a scale on the first-hour line.

Slide Precipitation Test for Syphilis.—In a series of 1,500 tests, Johnson made a comparative study of his results of the microscopic slide precipitation test, by the method of Kline and Young, with the three tube Kahn test, and with the Wassermann test. A uniform agreement of all three was found in 89 per cent. Agreement of microscopic tests and Kahn tests occurred in 96.3; agreement of microscopic tests and Wassermann in 91.3, and agreement of Kahn and Wassermann tests in 96.1.

Comparison of Kolmer and Kahn Tests.—Roderick, Salisbury and Cates regard the Kolmer test as being more reliable and sensitive for the diagnosis of syphilis and as a prognostic indicator in treated cases than the Kahn test, although the latter has merit. For the present the two tests should be used simultaneously.

Fatalities Following Injection of Arsphenamine.—Scott and Moore report two cases. A girl, aged 16, had been given three injections of neoarsphenamine with no immediate untoward effects. Six other patients were given injections of the same lot of drug without experiencing ill effects. Two days after the injection, the patient complained of a slight headache and malaise. This malaise and headache became very severe in the evening, and early on the morning of the next day she became comatose. There was no nausea or vomiting at any time. Three days after the injections, another one of the patients became ill with the same symptoms. The latter patient became comatose the same afternoon. Both patients presented the same clinical symptoms; namely, headache, malaise and coma; both received neoarsphenamine intravenously and were taking iodides by mouth, but no mercury had been used in either case. In the terminal

twenty-four hours of life in both cases there was a complete anuria. In one case a necropsy was performed. The authors report on it in detail.

Slide and Cover Method for Preparation of Blood Films.—The method proposed by Beacom for the preparation of blood films is termed the slide and cover method. A small drop of blood is placed near the end of a clean slide, and a medium to thin cover-slip is dropped on the blood, which will then flow out in a thin layer if the glass is clean and if there is not too much curvature to the slide. As soon as the blood has stopped flowing, the slide is held on the table with the left hand, and the first two fingers of the right are placed near the edges close to the left end of the cover glass. Then with an even, fairly rapid pull it is slid along the slide in the direction of its long axis. The amount of pressure necessary is only enough to keep the fingers from slipping from the spreader. This leaves a smooth, even film covering a large or small area of the slide, depending on the size of the drop used.

Laryngoscope, St. Louis

38: 1-64 (Jan.) 1928

Endoscopic Experiences. E. L. Lyers, St. Louis.—p. 1.
Hairpin in Esophagus of Infant. M. C. Myerson, New York.—p. 19.
Advanced Bilateral Mastoiditis with Slight Middle Ear Evidence. A. L. Cosett, Chester, Pa.—p. 20.
Slauter's Book and Byrd's Theory of Pathologic Currents. W. B. Hopkins, Tampa.—p. 23.
Leeches as Foreign Bodies in Upper Air Passages in Palestine. M. Salzberger, Jerusalem, Palestine.—p. 27.
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Primary Jugular Bulb Thrombosis: Case. J. C. Scal, New York.—p. 37.
Demonstration of Specimens of Sphenopalatine-Gasserian Ganglion. J. I. Klepper, New York.—p. 41.
Acute Occult Mastoiditis at Ten Weeks. H. B. Silver, Newark, N. J. —p. 45.
Pistol Tonsil Snare. P. S. Stout, Philadelphia.—p. 47.
Antrascope. P. S. Stout, Philadelphia.—p. 48.

Medical Journal and Record, New York

127: 117-172 (Feb. 1) 1928

Surgical Treatment of Trachoma. L. W. Fox, Philadelphia.—p. 117.
Otorrhea and Family Doctor. G. B. McAuliffe, New York.—p. 119.
Evaluation of Renal Function Tests. G. J. Eckel, K. G. Mowat and W. H. Krombein, Buffalo.—p. 121.
Air in Bladder in Conjunction with Roentgen Ray as Means of Diagnosing Bladder Conditions. H. Cohen, New York.—p. 124.
Loyalty. W. Lintz, New York.—p. 133.
Specific Treatment of Pneumococcic Ulcer of Cornea. M. R. Dinkelspiel, Wilkes-Barre, Pa.—p. 134.
*Mercurochrome in Treatment of Laryngeal Tuberculosis. H. F. Gammons, State Sanatorium, Ark.—p. 136.
Roentgen-Ray Therapy in Hyperthyroidism: 328 Cases of Thyrotoxicosis Subjected to Roentgen-Ray Treatment. W. H. Meyer, New York. —p. 137.
Goiter: Nonsurgical Types and Their Treatment. I. Bram, Philadelphia. —p. 142.
Therapeutic Value of Implants of Sheep Testicle in Human Beings: Fifty Cases. G. R. Satterlee, New York.—p. 145.
New Animal Skin Hormone Preparation. C. Thomalla, Berlin.—p. 150.
Freshly Prepared Pancreatic Extract in Treatment of Malignant Disease. A. H. May, Buffalo.—p. 152.
Arab Science: I. J. Wright, Pleasantville.—p. 153.
Different Kinds of Doctors. R. T. Morris, New York.—p. 161.

Mercurochrome in Treatment of Laryngeal Tuberculosis.—On the basis of his experience, Gammons concludes that mercurochrome-220 soluble in a 20 per cent solution is a valuable agent in the treatment of pharyngeal and laryngeal infections complicating pulmonary tuberculosis. Three times a week he applies the dye on the swab, being sure of getting enough of the solution into the larynx. The color persists for a few days. The mucous membrane tension is apparently much greater for the dye than for the silver salts preparation. There has never been any bad reaction from these treatments.

Military Surgeon, Washington, D. C.

62: 145-292 (Feb.) 1928

Ghent Congress of Royal Institute of Public Health—1927. G. Fitz-Patrick.—p. 145.
Field Service. J. W. Grissinger.—p. 157.
Base Hospital Medical Problem in America, France and Army of Occupation. W. C. Stoner.—p. 178.
Actinomycosis of Liver Following Suppurative Appendicitis. A. W. Greenwell.—p. 185.
Two Weeks' Course for Commanding Officers and Executives, Medical Field Service School, Carlisle Barracks, Pennsylvania. L. S. Medalia. —p. 198.
Women Nurses with Union Forces During Civil War. J. C. Stimson and E. C. Thompson.—p. 208.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Surgery, Bristol

15: 353-532 (Jan.) 1928

Epoch-Making Books in British Surgery. D'Arcy Power.—p. 353.
*Cholecystography: Toxic Effects of Dyes. B. M. Dick and V. G. H. Wallace.—p. 360.
Rupture of Urethra. H. Bailey.—p. 370.
Congenital Absence of Humerus. S. A. Smith.—p. 385.
Torsion of Great Omentum: Two Cases. C. MacAuley.—p. 387.
*Stabilization of Flail Leg. H. T. Gray.—p. 390.
Arthrodesis. W. R. Bristow.—p. 401.
*Treatment of Ankle and Leg Fractures by "Delbet" Ambulatory Plaster Splint. E. L. Robert.—p. 414.
*Case of Actinomycotic Ulceration of Duodenum and Jejunum. W. I. de C. Wheeler.—p. 430.
Congenital Malformations of Mesentery: Clinical Entity. G. E. Waugh. —p. 438.
*Bacteriology of Cholecystitis. A. L. Wilkie.—p. 450.
*Results of Splenectomy for Purpura Hemorrhagica. A. W. Spence.—p. 466.
*Surgical Diathermy in Breast Cancer: Application of Arc Electrode or Cutting Current to Radical Operation. J. Anderson.—p. 500.
Case of Fracture of Skull, Followed by Presence of Air in Cranial Cavity. R. D. Mothersole.—p. 514.
*Tendency to Recurrent Peptic Ulceration Following Gastro-Enterostomy for Duodenal Ulcer. W. Thompson and M. J. Stewart.—p. 517.
Case of Double Ureter, with Calculi in Each Channel. R. St. Leger Brockman.—p. 521.
Abdominal Torsion of Omentum. P. S. Foster.—p. 522.
Torsion of Portion of Omentum. G. A. Reid.—p. 523.
Congenital Tumor of Neck. D. W. Daniels.—p. 523.
Case of Pedunculated Lipoma of Upper Arm. B. T. Rose.—p. 525.

Cholecystography: Toxic Effects of Dyes.—Clinical experiences and experimental observations have convinced Dick and Wallace that the use of sodium tetraiodophenolphthalein in diagnostic doses is not free from risk in certain circumstances. In the absence of other contributory factors, normal bile containing sodium tetraiodophenolphthalein introduced experimentally into the pancreatic ducts is sufficient to produce acute pancreatitis. It may thus be inferred that in cases of cholelithiasis in which stones are present in the common bile duct, and the conditions are otherwise favorable for the retrojection of bile into the pancreas, the danger of acute pancreatitis occurring will be much greater if the regurgitated bile contains the phenolphthalein salt. In obstructive jaundice the normal route of elimination of the drug is unavailable, and small quantities are excreted in the pancreatic juice. In animals with experimental biliary obstruction, especially in rabbits, it was found that pathologic changes occurred in the pancreas, ranging from simple vascular congestion to hemorrhagic pancreatitis. The conclusion to be drawn from this is that there is risk of injury to the pancreas by the administration of the agent to jaundiced patients who have chronic obstructive lesions of the biliary passages. The pathologic changes which were experimentally produced in the liver lend strong support to the opinion that the toxicity of the drug on this organ is greater when biliary obstruction is present. Although the agent is eliminated by the kidney in biliary obstruction, no ill effects apparently ensue in the normal kidney; nor, indeed, is this to be expected, as the rate of excretion is slow. In two of the fatal cases reported by Dick and Wallace, larger doses than are now known to be safe were employed.

Stabilization of Flail Leg.—Gray pleads for the revision of the accepted views on the subject of arthrodesis of the knee in cases of extensive infantile paralysis of the lower limbs. The cases selected for operation fall into two groups: (1) those in which the lesion in the cord is so extensive that there is no return of muscle power whatever; and (2) those in which the degree of recovery is so small that the limb can never support the body weight without the help of irons so cumbersome as to constitute a serious impediment to walking. The aim of the operation must be solid bony union at

the knee joint, and the achievement of this must be certain. Such absolute certainty can be insured only by the use of a bone graft. Gray has used this method for eight years and has not had failure of bony union.

Delbet's Plaster Cast for Ankle Fractures.—Robert is of the opinion that use of the Delbet plaster in all cases of ankle injury shortens considerably the period of treatment, as compared with other methods, and that it dispenses with the tedious and expensive course of physical therapy required by them. In leg fractures, full weight-transmission through the seat of fracture, made possible by using the Delbet plaster, stimulates rapid formation of strong callus and so shortens the period of treatment.

Actinomycosis of Duodenum and Jejunum.—Wheeler's patient had been ill for four months suffering from vague abdominal pains, with loss of weight, loss of appetite, and gastric stasis. His temperature ranged from 99 to 101, and cachexia was well marked. Routine bedside examination revealed nothing except tenderness and some rigidity over a wide area above the umbilicus. Hydrochloric acid was absent from the stomach contents, and raisins given at night were found in plenty on washing out the stomach the following morning. Blood cultures were reported as negative. The clinical diagnosis was cancer of the stomach. The abdomen was opened in the middle line above the umbilicus. The stomach and the first portion of the duodenum were examined and were found free from ulceration or other abnormality. A loop of the jejunum about one foot from the duodenojejunal flexure was found to be the site of a tumor about the size and shape of a bantam's egg. The loop of jepunum was resected and the intestine united by end-to-end anastomosis. No other lesions were discovered at operation. On the eighth day after operation the patient had a sudden pain; perforation had obviously taken place, and he died in a few hours. At the postmortem examination the third portion of the duodenum was found to be ulcerated in much the same manner as the loop of jejunum which was resected. The immediate cause of death was leakage at the line of anastomosis. The ulceration was of an almost diphtheritic type with comparatively little suppuration, the tissue reaction being mainly of the plasma-cell type with lymphoid-cell infiltration. Many micro-organisms were found in the superficial sloughs, the preponderating one being of streptothrix type. Organisms of the ray-fungus type were found in the floor of the jejunal ulcer, but only in the slough of the duodenal one. As no streptothrix was found in the lymphatic glands it is difficult to state with certainty that it was the causal agent of the ulceration, but there is sufficient evidence to consider it as being a likely factor in the process.

Bacteriology of Cholecystitis.—The bacteriology of fifty consecutive cases of gallbladder disease submitted to operation has been carefully worked out by Wilkie. In the vast majority of cases of chronic cholecystitis the bile was sterile on culture. Cultures from the submucous and outer coats leaving the mucosa intact have given a growth of streptococci in 42 per cent of cases. Bile has been shown to inhibit the growth of this streptococcus. The cystic gland in cases of cholecystitis has been shown to yield a growth of streptococcus in 86 per cent of cases. *Bacillus coli* was recovered from the bile in only 6 per cent of cases. Experimental studies tend to prove that cholecystitis appears to be a blood-borne streptococcic intramural infection.

Splenectomy for Purpura Hemorrhagica.—It is suggested by Spence that purpura hemorrhagica is a disease of the whole of the reticulo-endothelial system and that three types exist, depending on the extent of involvement of the system. The effect of splenectomy in a given case depends on the type to which the case belongs.

Surgical Diathermy in Breast Cancer.—Of fifty-six cases of carcinoma of the breast excised by the arc electrode (1923-1926), Anderson reports that forty-three patients are alive and apparently well. Thirty of these had glandular metastases at the time of operation. There has been no case of simple local recurrence; but two patients, in whom the disease was found at operation to be beyond the range of excision, ultimately died of diffuse general metastasis with local and general nodules. There has been only one case of appreciable edema of the arm, and in this case malignant glands were found adherent to the axillary vessels and nerves. The edema has now receded and the patient appears well. There was no case of secondary hemorrhage or of protein shock.

Recurrent Peptic Ulceration Following Gastro-Enterostomy.—A case is reported by Thompson and Stewart in which, within sixteen years, four operations of gastrojejunostomy, two posterior and two anterior, and one of partial gastrectomy, were performed. The original duodenal ulceration and subsequent jejunal ulceration in relation to the two posterior gastrojejunal stomas cicatrized completely in turn, while fresh jejunal ulceration in relation to the third stoma was present at the time of the partial gastrectomy. The patient died of chronic interstitial nephritis two years and one month after the fifth and final operation, and at necropsy two subacute ulcers were found in the remaining portion of the stomach.

Lancet, London

1: 167-216 (Jan. 28) 1928

*Damages to Bones and Reputations. E. W. Hey Groves.—p. 167.
Public Health Service and Private Practitioner. F. E. Wynne.—p. 172.
*Unrecognized Toxic Substances in Human Feces. D. C. Watson and P. De.—p. 174.
*Relative Frequency of Various Positions of Vermiform Appendix. C. P. G. Wakeley and R. J. Gladstone.—p. 178.
*Relation of Deficiency of Vitamin B to Atony of Stomach. M. J. Rowlands and E. Browning.—p. 180.
Treatment of Primary or Essential Marasmus by Ostelin. K. McFadyean.—p. 181.
Squint Cured by Sight Exercise. K. R. Smith.—p. 182.
*Inversion of Uterus. C. L. Lander.—p. 182.

Damages to Bones and Reputations.—The medicolegal importance of a roentgen-ray examination of all fractures is stressed by Hey Groves. In no less than 90 per cent of all cases in which litigation resulted from the treatment of fractures, the main point on which a charge of negligence was based consisted in the absence of roentgen-ray examination. In one third of the cases a correct diagnosis of the main fracture had been made, but the existence of some complication or malunion had been missed.

Toxic Substances in Human Feces.—Experiments made by Watson and De prove the existence of a heretofore unrecognized toxic substance or substances in the feces in the different diseases investigated. This substance—or substances—was absent or relatively absent in the feces of lower animals and of men when the bowel was normally clean. An important etiologic relationship exists between the unhealthy state of the lower bowel and the disease, revealed by the results of treatment directed toward restoring the bowel as far as possible to its natural state of cleanliness.

Positions of Appendix.—In 5,000 cases reviewed by Wakeley and Gladstone the appendix was postcecal and retrocolic in 3,219; "pelvic," on psoas muscle, near or hanging over the brim of the pelvis in 1,606; subcecal, beneath the caput ceci in 101; anterior or preileac in forty-seven, and "splenic" or postileac in twenty-five.

Relation of Deficiency of Vitamin B and Gastric Atony.—Rowlands and Browning conclude from their study that the commonest cause of an atonic condition of the stomach, leading to marked distention and downward displacement, is the absence of vitamin B from the diet, and in all probability the similar condition seen so often among patients is due to the deficiency of vitamin B in modern diet. They found that the detoxicated embryo of cereals has a much more powerful vitamin B content than yeast.

Inversion of Uterus During Puerperium.—Lander relates the case of a woman whose baby was born after prolonged forceps labor. A "battledore" placenta was delivered an hour after the child. The puerperium was uneventful and the patient made excellent progress, except that catheterization was required. On the ninth day the patient was instructed by the midwife in charge to sit out of bed and attempt to micturate spontaneously. While the patient was making expulsive efforts in a sitting posture, the uterus suddenly became inverted and presented at the vulva.

Bulletin Médical, Paris

41: 1445-1472 (Dec. 28-31) 1927

*Intravenous Bromotherapy in Pruritus. A. Sézary.—p. 1451.
Accidents of Vaccinotherapy in Dermatology. C. Flandin.—p. 1453.
Hydroa and Colic Disturbances. P. Blum and E. Terris.—p. 1455.
Tattooing and Functions of Skin. A. C. Guillaume.—p. 1457.
Case of Perineal Pruritus. L. Huet.—p. 1464.

Sedative Medication, Especially Intravenous Bromotherapy in Pruritus.—Sézary had prepared ampoules of 10 cc. of a sterilized solution of sodium bromide containing 10 Gm. of this compound per one hundred cubic centimeters of a sodium chloride solution (7.5:1,000). Patients with pruritus received daily intravenous injections of from 10 to 15 cc. In all, twenty-nine cases were treated and cure was effected in most of those in which the dermatosis was not connected with severe organic lesion. Intravenous bromotherapy acts not only through its sedative effect on the nervous system, but also sometimes by shock and sometimes by a modification of general biologic conditions.

Gazette Hebdomadaire des Sciences Méd. de Bordeaux

49: 49-64 (Jan. 22) 1928

*Parathyroid Therapy in Acute Chorea. Molin de Teyssieu and Fitoussi.—p. 51.

Parathyroid Therapy in Acute Chorea.—A girl, aged 12 years, who had acute chorea, failed to improve when treated with rest in bed, a milk diet and a solution of arsenous acid. When given parathyroid extract, she improved rapidly. Cure was complete in less than a month.

Gazette des Hôpitaux, Paris

101: 49-64 (Jan. 14) 1928

Pathogenesis and Physiopathology of Toxic Uremia. A. Puech.—p. 53.
*Danger of Spinal Anesthesia in Total Hysterectomy. Y. Bourde.—p. 56.

Danger of Spinal Anesthesia in Total Hysterectomy.—In spinal anesthesia there is danger of defecation during operation. An enema should be given on the morning of operation. After the vulvovaginocervical toilet, the vagina should be packed with sterile gauze. Bourde is led to make these suggestions because of an unfortunate case in which, when he removed the vaginal forceps, feces irrupted through the vagina and covered the operative field. In spite of the most careful treatment, the patient died.

Paris Médical

64: 33-48 (Jan. 14) 1928. Partial Index

*Reactivation of Syphilis by Antisyphilitic Treatment. G. Milian.—p. 42.

Reactivation of Syphilis by Antisyphilitic Treatment.—Reactivations of syphilis during treatment are due to two factors; either medication is given in insufficient or irregular or too widely separated doses, or else the spirochete is resistant to the drug used. Most frequently these reactivations are due to the use of neoarsphenamine.

64: 49-80 (Jan. 21) 1928

Dermatology in 1928. G. Milian and L. Brodier.—p. 49.
*Dermatoses of Canine and Feline Origin. Hudelo and Rabut.—p. 56.
Case of Hallopeau's Continuous Acrodermatitis. J. Nicolas and J. Lacassagne.—p. 61.
"Chilblain" Tuberculids and Xanthoma in the Same Lesions. Gougerot.—p. 64.
*Dressings of Ointment on Muslin. C. Simon.—p. 68.
*Cutaneous Reactions and the Menopause. H. Montlaur.—p. 69.
*Actinotherapy in Psoriasis. L. Marceron.—p. 73.
*Ulcerous Purpuric Bullous Tuberculids. G. Milian.—p. 75.

Dermatoses of Canine and Feline Origin.—Mange in the dog is usually caused by *Sarcoptes scabiei canis* and in the cat by *Notoedres minor cati*. The presence of the former in the human skin results in a pruritus accompanied by an eruption of papular vesicles. It is an eruption relatively discrete, disseminated, attacking especially the anterior surface of the forearm, the abdominal wall and the internal surface of the thighs. The *Notoedres minor cati* causes an eruption beginning with a papule, sometimes like nettle rash, which soon is topped with a vesicle and after ten days is transformed into a typical papule of prurigo. It may be distinguished by its monomorphous aspect and by its distribution, which is dependent on the usual places of contact with the cat. The eruption is accompanied by a pruritus more severe at night. Cat mange will heal of itself if the cause of the disease is removed. Mange of canine origin should be treated as is human mange by the classic friction or by Milian's treatment. Inflammations caused by the trichophyton seem to be more often due to the dog. Favus of animal origin is rare in man. In microsporias the eruption is present only or is most marked on the uncovered parts. It is composed of some rounded erythematosquamous elements but especially of highly inflammatory lesions. The treatment of ringworm caught from animals is the same as that of all epidermomycoses.

Dressings of Ointment on Muslin.—A thin piece of muslin covered with ointment is an excellent dressing for localized skin diseases, especially on the limbs. Simon used five different kinds of ointment muslins; zinc paste muslin, weak reducing ointment, strong reducing, very strong reducing ointment and yellow oxide of mercury ointment muslin, in cases of eczema, psoriasiform parakeratosis, psoriasis, impetigo. The ease of its use, its cleanliness and the results obtained seemed superior to those obtained with the same preparations used as simple ointments, pastes or plasters.

Cutaneous Reactions and the Menopause.—The skin diseases most common at the menopause are acne rosacea, pruritus, eczematiform reactions and alopecia. Opotherapy, sedative treatment, desensitization and various external treatments are recommended.

Actinotherapy in Psoriasis.—An intense erythema caused by light rays acts very favorably on psoriasis. The rays of the sun may be used, but the most practical source of short rays is the mercury vapor quartz lamp. Because of the pain, only a limited surface should be exposed at one time. The patients should be advised of the pigmentation which will follow exposure. Usually it suffices to produce a severe erythema twice in succession over one area to free it of all lesions of psoriasis. If some small actino-resistant points of psoriasis remain, these may be got rid of with a chloroform solution of guttapercha-containing chrysarobin.

Ulcerous Purpuric Bullous Tuberculids.—Milian reports a case of ulcerous lesions of the skin, some of them covered with crusts analogous to those of ecthyma, accompanied by purpuric spots on the lower limbs. These apparently followed the appearance of a certain number of bullae, so that taken all in all it seemed to be an ulcerated bullous purpura. Histologic examination of these bullous lesions did not reveal typical tuberculous formation. A cuti-reaction with raw tuberculin provoked the formation of a bulla which was followed by an ulceration, the structure of which was analogous to that of the ulcerations on the lower limbs of the patient.

Presse Médicale, Paris

36: 17-32 (Jan. 7) 1928

*Sodium Chloride in Intestinal Intoxication. A. Gosset, L. Binet and D. Petit-Dutaillis.—p. 17.
Etiology and Pathogenesis of Otitic Osteoporosis. A. Malherbe.—p. 21.

Value of Sodium Chloride in Hypertonic Solution and in Large Doses in Intoxication from Occlusions of Digestive Tract.—Gosset et al. report two cases of intestinal occlusion in which the administration of sodium chloride as a measure supplementary to operation had very good effects. They inject, in the first twenty-four hours, 1 liter of physiologic serum under the skin and 100 cc. of sodium chloride solution (20 per cent) intravenously, in five injections of 20 cc. at regular intervals. The treatment should be continued for the first forty-eight hours with no interruption at night. The chlorides of the serum should be determined daily as a control of the therapy.

36: 33-48 (Jan. 11) 1928

*Vaccination of the New-Born Against Tuberculosis. A. Calmette.—p. 33.
Pressure of Spinal Fluid in Epilepsy. R. Schrapf.—p. 34.
Pharmacologic Action of Amino Bases of Ergot. Raymond-Hamet.—p. 35.

Preventive Vaccination of the New-Born Against Tuberculosis by B C G.—Between July 1, 1924, and Dec. 1, 1927, 52,772 children have been vaccinated at birth in Paris and

in the departments. Of these, 5,749 born of tuberculous mothers or living in a tuberculous environment have been followed. The general mortality of 3,808 infants up to 1 year of age, 3.1 per cent, is less than one half of that among the nonvaccinated children, with or without tuberculous contact. For 1,941 children between the ages of 1 and 3½ years, the general mortality was 1.2 per cent, lower by 0.4 per cent than the mortality of the age group 1 to 4 years in nonvaccinated children, with or without tuberculous contact. Four of the twenty-one deaths in this group were presumed to be from tuberculosis. Revaccination at the end of the first year was done in 298 cases. All of these children are living and have reached from 2 to 3½ years of age. It seems that the antituberculous immunity, produced by B C G, lasts much longer than had previously been anticipated.

Progrès Médical, Paris

54: 33-80 (Jan. 14) 1928

*Restricted Nitrogen Diet. C. Richet and Dublineau.—p. 41.
Pulmonary Tuberculosis and Puerperium. M. Metzger.—p. 45.
*Spinal Anesthesia. E. Bressot.—p. 49.
Tuberculous Ulcer of Lower Lip. Lortat-Jacob.—p. 54.

Restricted Nitrogen Diet.—A normal man usually consumes 1.40 Gm. of protein per kilogram of body weight per day, a normal child of 12 years, 2.50 Gm. The strict nitrogen-poor diet comprises fruits, sugars, jellies, soup with tapioca, denitrogenized and dechloridized bread ad libitum, with 100 Gm. of potatoes, 100 Gm. of carrots and 100 Gm. of fresh cream. This diet furnishes 0.15 Gm. of protein per kilogram of body weight and should be used only for the sick. The modified restricted nitrogen diet gives 0.20 to 0.45 Gm. of protein per kilogram. To the above articles of diet the authors added cauliflower, cabbage, Jerusalem artichokes, string beans, rice and small amounts of macaroni and the like. The allowance of potatoes is increased, the sugar decreased. Two or three times a week, 75 Gm. of meat or fish is allowed. This diet may be augmented by allowing 100 Gm. of meat four times a week. Occasionally, a fruitarian day may be interposed. The foods to be proscribed are milk, eggs, cheese, peas and beans. The caloric value of the diet must be kept in mind. Animal protein is not prohibited any more strictly than vegetable protein. In normal old people, a diet furnishing 0.4 or 0.5 Gm. of nitrogen per kilogram of body weight, may be prescribed, but this diet is contraindicated in normal children, adolescents and adults. It is indicated in hyperazotemia, even though slight. It is good in arteriosclerosis, in hypertension, in infantile prurigo. A few cases are reported.

Spinal Anesthesia.—Spinal anesthesia should be reserved for adults, especially the aged. It should not be used in the tuberculous, in the syphilitic or in persons with nervous disturbances, with shock or severe trauma. It is especially suitable in operations below the umbilicus. Bressot collected thirteen instances of failure of spinal anesthesia in his first three years of practice, during which time he administered it 385 times. In the next two years he had three failures in 157 anesthesias and none in the last two years among seventy-six. He has seen many instances of minor and one instance of more severe bulbar disturbances resulting from this form of anesthesia. Vomiting occurred during operation in 2.5 per cent of his cases, within eighteen hours in 8.5 per cent. It was prolonged during from three to five days in nine patients. Headaches coming on eight or ten hours after operation and lasting twenty-four or thirty-six hours occurred in 17.5 per cent of the cases, but yielded quickly to acetyl salicylic acid. Headaches lasting from two to five days were noted in 6.5 per cent of the cases. Septic meningitis was not seen. Kernig's sign with photophobia was noted in one patient who had had spinal meningitis two years previously. Pain in the back and retention of urine are fleeting and are not more frequent than with any other anesthetic. There were seven cases of pulmonary congestion, one of paralysis of the external oculomotor nerve. None of the author's personal cases had medullary disturbances. He saw them in two cases which had been referred to him. In two cases defecation occurred on the operating table.

Schweizerische medizinische Wochenschrift, Basel

58: 25-48 (Jan. 14) 1928

Nutrition and Reproductive Organs. H. Guggisberg.—p. 25.
Iodine Goiter in Switzerland. W. Flück.—p. 28.
*Postclimacteric Uterine Hemorrhages with Ovarian Tumor. M. Wetterwald.—p. 37.
*Sterility After Cesarean Section. J. Mennet.—p. 41.
Appendicitis Caused by Worms. A. Müller.—p. 42.

Postclimacteric Uterine Hemorrhages with Ovarian Tumor.—Wetterwald reports three cases of postclimacteric uterine bleeding for which there was no cause other than ovarian tumor.

Sterility After Cesarean Section.—The sterility figures for cesarean section deliveries are so high that they should influence the choice of the physician attending the confinement, especially in primiparae. The percentage of postcesarean sterility is smaller in the country districts than in the city. Statistics are given.

Pediatria, Naples

36: 1-56 (Jan. 1) 1928

Sepsis in the New-Born. R. Vaglio.—p. 1.
*Test for Kala-Azar. S. Fabris.—p. 5.
Three Cases of Chloroma. G. Castorina.—p. 15.
*Pernicious Malaria in Children. G. A. Piana.—p. 24.

Test for Infantile Kala-Azar.—Of the 300 blood serums from children which were tested, twenty-five were from children with leishmaniasis in various stages and the rest were from normal children and children with diseases such as tuberculosis, malaria, splenic anemia and congenital syphilis. The serum from children with leishmaniasis, when brought into contact with solutions of urea antimony compounds, invariably yielded a white ring reaction. The test was always negative with inorganic antimony compounds or urea solutions. The best solution is one of from 0.5 to 1 per cent. Inactivated serums gave inconsistent results. Those from patients with other diseases proved negative.

Hyperglycorrhachia as a Diagnostic Sign in Pernicious Malaria in Children.—In twenty children with malaria complicated with meningeal manifestations, the sugar content of the cerebrospinal fluid usually increased, especially in pernicious cases. The level varied from 0.70 to 3 Gm. per thousand cubic centimeters.

Policlinico, Naples

35: 1-44 (Jan. 9) 1928. Practical Section

*Pancreatic Duct Obstruction. G. Martino.—p. 3.
Retrograde Strangulation of Testis. G. Brendolan.—p. 5.

Diagnosis of Obstruction of the Pancreatic Duct.—After a preliminary twenty-four hour fast, the patient is given peptone, meat extract or broth to stimulate gastric secretion. Blood specimens are obtained before the test and half an hour, an hour and three hours afterward. In case of complete obstruction of the pancreatic duct, instead of the usual increase of the blood sugar curve, a decrease or at least no change will be noted.

Riforma Medica, Naples

44: 1-24 (Jan. 2) 1928

*Treatment of Leukemia and Polyarthritis. P. Moretti.—p. 2.
Boveri's Spinal Fluid Test. A. M. Fiamberti.—p. 7.

Relapsing Fever Treatment of Leukemia and Chronic Polyarthritis.—The results in one case of leukemia and in another of subacute rheumatic polyarthritis justify resorting to relapsing fever treatment of such cases, in Moretti's opinion.

Rivista di Clinica Medica, Florence

28: 705-744 (Sept. 30) 1927

*Relapsing Fever Treatment of Neurosyphilis. E. Signorelli.—p. 705.

Relapsing Fever Treatment of Neurosyphilis.—The three cases treated with relapsing fever were of general paralysis, syphilitic meningitis and tabes. The result was excellent in all. Relapsing fever therapy makes previously resistant cases more amenable to treatment with arsenicals. On the other hand, treatment with bismuth and arsphenamine seems to enhance the therapeutic effect of relapsing fever.

Archivos de Medicina, Cirugía y Espec., Madrid

27: 745-796 (Dec. 31) 1927

*Gluteal Clonus. J. Sanchís Banús.—p. 745.
*Covered Perforations. L. Urrutia.—p. 752.
Vaccine Treatment of Chancroid. J. S. Covisa and J. Gay Prieto. —p. 756.
Uterine Epithelium and Cancer. J. Torre Blanco.—p. 763.
*Cancer of Esophagus. J. M. Madinaveitia, J. Alonso and J. G. Garcia Morán.—p. 768.
Elimination of Urea. R. Fraile.—p. 771.
Histamine and Gastric Secretion. H. G. Mogena and A. López Fernández.—p. 774.
Sella Turcica in Children. M. y F. Arce.—p. 779.
Autohemotherapy in Skin and Venereal Diseases. C. García Casal. p. 787.

Gluteal Clonus; a New Reflex.—There is a gluteal clonus, Sanchís Banús states, exhibiting the same type of phenomenon as the ankle and knee jerks. This reflex was elicited in two patients with a pyramidal syndrome. It is not, however, a pathologic sign. This reflex represents the usual response of the muscle to the stimulus caused by stretching of the tendons.

Covered Perforations of Peptic Ulcer.—By covered perforations Urrutia means those not followed by a general acute peritonitis. If left alone, about 10 per cent of the patients survive. Out of thirteen patients operated on, one died. In some cases, the patient survives one perforation to die afterward of another perforation. Secondary abscesses also develop around the ulcer or in neighboring structures. The perforation may not cause severe pain. If surgical treatment is given immediately, the death rate is from 10 to 15 per cent.

Esophageal Cancer on a Caustic Scar.—At the Madinaveitia Institute, esophageal cancer represents fully 25 per cent of all cancers of the alimentary tract. The tumor reported was exceptional in that it did not cast any mediastinal shadow in the roentgenogram. The diagnostician was also misled by a history of burn by a caustic with the usual course. The only suspicious sign was bleeding at touch.

Ars Medica, Barcelona

3: 365-404 (Nov.) 1927

Laryngeal Tuberculosis. L. Vila Abadal.—p. 365.
Uremia. A. Rémond.—p. 371.
*Treatment of Hemophilia. J. Pi-Suñer Bayo.—p. 378.

Treatment of Hemophilia.—In a case of hemophilia, in a boy, aged 12, treatment with vitamin preparations and triple calcium phosphate has seemed to be successful. In little over a year, the blood coagulation time had decreased from two hours and ten minutes to fourteen minutes. The serum calcium increased from 5.7 mg. to 11.4 mg. per hundred cubic centimeters. The existing oxaluria subsided.

Boletín de la Soc. de Obst. y Ginec., Buenos Aires

6: 508-574 (Nov. 30) 1927. Partial Index

*Deep Roentgen-Ray Therapy in Uterine Cancer. F. Carranza and A. H. Roffo.—p. 508.
Radium in Cervical Cancer. N. Capizzano.—p. 517.

Deep Roentgen-Ray Therapy in Uterine Cancer.—Carranza and Roffo report on more than 500 patients with cancer of the uterus treated with roentgen rays since 1923. The types of tumor were: squamous cell carcinoma, 60 per cent; metatypical squamous cell carcinoma, 30 per cent; basal cell carcinoma and adenocarcinoma, 5 per cent each. No relation could be traced between the histologic type and the postirradiation course. No patient was cured, but few were in the first (operable) stage when applying for treatment. In many patients, including those in the third stage with an inoperable tumor, a temporary improvement is mistaken for recovery.

Brasil-Medico, Rio de Janeiro

41: 1311-1336 (Dec. 10) 1927

*Oral and Nasal Immunization. V. Brazil and J. Vellard.—p. 1311.
Fernandez Figueira's Cephaloplegia. F. Moncorvo, Jr.—p. 1318.
Ultraviolet Rays in Ophthalmic Herpes Zoster. T. Falcão.—p. 1319.
Intra-Uterine Fracture of Clavicle. E. Filgueiras.—p. 1320.

Experiments in Immunity by the Oral and Nasal Routes.—Experiments in guinea-pigs and rabbits demonstrate that diphtheria toxin is absorbed to a greater or lesser extent by the mucous membrane of both mouth and nose. The nasal route is far more effective and easier. It is therefore the route of choice for either anatoxin or lipovaccines. Nasopharyngeal absorption occurs not only with diphtheria toxin, but with other toxins (tetanus, dysentery) and snake venom. The method, because of its simplicity and harmlessness, has much to commend it.

Archiv für Psychiatrie und Nervenkrankheiten, Berlin

82: 123-284 (Nov. 15) 1927

Histopathology of Microglia. L. von Meduna.—p. 123.
Position of Psychiatrist with Regard to Penal Code. E. Schultze. —p. 194.
*Physicochemical Changes in the Blood in Experimental Epilepsy. Waschetko and Seletzky.—p. 232.

Physicochemical Changes in the Blood in Experimental Epilepsy.—Tests made on rabbits before and after the cerebral cortex was irritated by the faradic current showed that, if the experiment is repeated several times on the same animal at intervals of less than three days, the effect, in the form of convulsions, is caused by lower electric tension, that is, lability of the cerebral cortex is established. If the animal is allowed a rest period of seven or more days, it then reacts to the faradic current in the same way as an animal undergoing the experiment for the first time. The catalase index after irritation not only does not decrease but rather increases; on the other hand, the index of the catalase begins to fall in proportion as the brain becomes labile with regard to the irritating agent, that is, in so far as a lesser irritation is necessary for the production of the effect of the convulsion. Electric conductivity of the serum is reduced after the experiment. These results seem to confirm the opinion of many authors that epilepsy is not a disease of the brain but the result of a disturbance of metabolism, analogous to the other conditions of metabolic dyscrasia with epileptiform convulsions, uremia and eclampsia.

Beiträge zur Klinik der Tuberkulose, Berlin

67: 363-466 (Nov. 19) 1927

Part Played by Forms of Second Allergy Period in Pulmonary Tuberculosis of Adults. K. Krause.—p. 363.
Pneumoconiosis and Tuberculosis. K. Krause and F. Loben.—p. 369.
*Fate of Patients with Open Tuberculosis. K. Krause.—p. 386.
Cardiac Disturbances After Pleuritis; Prognosis of Mediastinal Displacements. F. Loben.—p. 389.
Treatment of Syphilis in Tuberculosis Sanatoriums. F. Loben.—p. 400.
Place of Hospitals in Combating Tuberculosis. C. Coerper.—p. 404.
Psychology of Tuberculous Patients. Creischer.—p. 408.
*Tuberculosis in Early School Age. O. Kieffer.—p. 417.
Culture of Tubercle Bacillus for Diagnosis. C. Sonnenschein.—p. 451.
Tuberculin Test in Schools. Vonessen.—p. 464.

Fate of Patients with Open Tuberculosis.—Of 969 patients treated for open tuberculosis in sanatoriums between 1902 and 1922, 40 per cent were living in the spring of 1927; 83 per cent of these were able to work. The figures show further that a patient who is alive five years after sanatorium treatment of open tuberculosis may expect to live and be capable of work for a long time.

Tuberculosis in Early School Age.—Kieffer reports the results of systematic, serial clinical and roentgenologic examinations of 1,700 children during the first three years of school life. Of 879 boys of the first year (from 5½ to 6½ years old) 30.7 per cent gave a positive tuberculin reaction; of 798 girls, 25.9 per cent gave a positive reaction. In the third school year the figures were 41.3 per cent for the boys and 48.7 per cent for the girls. The clinical diagnosis of tuberculosis could be made from the lung changes alone in a very few cases. A fresh primary focus was found eight times in the first-year children, once in the third-year children. In some cases it was possible to follow the changes that the tuberculous foci underwent from the first to the third school year. The incidence of various varieties of tuberculosis is given and a number of significant case histories are discussed.

Deutsche medizinische Wochenschrift, Berlin

54: 43-84 (Jan. 13) 1928. Partial Index

Value of Morphologic and Functional Considerations for Diagnosis and Therapy. Goldscheider.—p. 43.
*Management of Labor in Heart Disease. E. Sachs.—p. 45.
*Protective Inoculation Against Diphtheria. J. Schwalbe.—p. 47.
Treatment and Control of Addiction to Alkaloids. P. Wolff.—p. 51.
Arsphenamine Treatment of Syphilis. D. Feuerstein.—p. 54.
*Roentgenologic Diagnosis of Intestinal Tuberculosis. G. Hammer. —p. 57.

Management of Labor in Heart Disease.—The dangers of labor for the patient with heart disease are three-fold, psychic excitement which causes blood pressure fluctuations, the extra burden on the heart in the second stage and the creation of a vacuum in the heart after labor, if, after the emptying of the uterus, the intra-abdominal blood pressure falls and acute fluctuations occur. The injured heart usually recovers speedily if there is no infection. A decompensated case of mitral stenosis and a compensated case of aortic insufficiency are reported.

Value of Protective Inoculation Against Diphtheria.—Schwalbe collected the opinions of some twenty German pediatricians on the subject of preventive inoculation against diphtheria. Many of them do not consider it necessary, because diphtheria is not very common; under special circumstances, in isolated cases, it is recommended. In general, the idea of obligatory inoculation is not supported.

Roentgenologic Diagnosis of Intestinal Tuberculosis with Examinations of Function of Ileocecal Valve.—Most important for the diagnosis of intestinal tuberculosis are the symptoms which are caused by anatomic changes in the intestinal wall. Pointed or wavy irregularities in the contour are evidence of ulcerous tissue defects. Rigidity of the wall, accompanied by obliteration of the haustra, narrowing of the lumen and reduced extensibility, is a manifestation of infiltrative processes in the intestinal wall. The ulcer ring shadow can be taken as indicating an ulcer filled with barium residue. The Stierlin symptom, in so far as it expresses a narrowing of the lumen through infiltrating and tumor-like changes of the intestinal wall, and intestinal stenosis, which may, however, be due to other causes, are further evidence. The symptoms arising from functional influences are: irregularities in filling and the Stierlin symptom, in so far as it comes about through increased contraction on account of greater irritability of the diseased intestine. The Stierlin symptom is present in about 50 per cent of the cases of ulcerous tuberculosis, but also appears in the healthy intestine. It is not easy to differentiate tuberculosis from ulcerous colitis because in the latter ulcerous tissue defects are also present, although the changes seem to be less. Intestinal carcinoma is scarcely to be differentiated from ileocecal tuberculosis. Insufficiency of the ileocecal valve must be regarded as normal.

54: 85-126 (Jan. 20) 1928. Partial Index

Frontal Psychoses. M. Rosenfeld.—p. 85.
Importance of Venous Rete Mirabile for Closure of Certain Openings of Body. H. Stieve.—p. 87.
Regional Jaundice: Blistering Method of Examining Tissues. F. Umber and M. Kosenberg.—p. 90.
*Monocytes in Experimental Tumor Production. E. Haagen.—p. 92.
*New Method of Evaluating Toxin and Antitoxin in Isolated Vessel Preparations. E. Friedberger.—p. 94.
*Treatment of Nervous Aerophagy. J. H. Schultz.—p. 95.

Monocytes in Experimental Tumor Production.—Haagen claims that the monocytes are probably the bearers of the tumor agent. Only monocytes obtained from the blood of sarcomatous chickens could be used in the successful transplantation of chicken sarcoma. Tumor transference was also carried out with the isolated monocytic ameboid cells from the sarcoma cultures, but not with the fibroblasts so obtained. Normal monocytes acquire the faculty of bringing about sarcoma formation in the chicken if they are treated beforehand with otherwise inactive sarcoma filtrates. With fibroblasts, tumors are not formed. If fresh or cultivated normal monocyte cultures are injected into chickens, together with very weak solutions of arsenous acids, a highly malignant sarcoma, such as never develops with fibroblasts, is obtained. The malignant element must be a chemical substance present only intracellularly in the active form, probably an enzyme, ferment or vitamin. It originates in exogenous irritation, which is also of chemical nature, but must play the rôle merely of activator or catalyzer.

New Method of Evaluating Toxin and Antitoxin in Isolated Vessel Preparations.—The fluid to be examined is passed through the properly kept abdominal aorta of a guinea-pig and the number of drops escaping in a certain length of time is calculated. Most toxins cause a great decrease in the number of drops, while antitoxic serums are without influence. Through mixing the vessel-narrowing toxin solutions with the corresponding antitoxic serum, the amount of antitoxin is determined which causes the complete disappearance of the action of the toxin.

Treatment of Nervous Aerophagy.—There are persons in whom there is lack of coordination between swallowing and breathing. They take a deep inspiration before and with each swallow, so that when they swallow, a centripetal air current is established. If this is pointed out to the patient, and he is instructed to practice eating and drinking and to swallow only in the expiratory stage or in the accompanying or following breath pause, in many cases the tympany after meals will disappear, as Schultz has proved.

Klinische Wochenschrift, Berlin

7: 97-144 (Jan. 15) 1928. Partial Index

Circulatory Conditions and Distribution of Blood Cells. R. Fåhraeus.—p. 100.
Gas Treatment of Malignant Tumors and Cachectic Conditions. B. Fischer-Wasels.—p. 106. C'td.
Functional Tests of Vegetative Nervous System. A. Kamsler.—p. 110.
Group Determination in Transfusions. K. Landsteiner.—p. 112.
*Treatment of Exudative Diathesis with Hydrochloric Acid Milk. K. Scheer.—p. 113.
Experiences with Irradiated Ergosterol. H. Strote.—p. 114.
*Cholesterol Metabolism and Growth of Hair. K. Linser and H. Kähler.—p. 116.
Group-Specific Organic Differences in Human Beings. E. Witebsky.—p. 118.
Oral Immunization. K. Fuerst and M. Klotz.—p. 118.

Treatment of Exudative Diathesis with Hydrochloric Acid Milk.—Scheer reports six cases of exudative diathesis in infants in which hydrochloric acid milk brought about complete cure in from two to four weeks. The healing process is independent of body weight. The milk is prepared as follows: To 250 cc. of cool, boiled milk is added, drop by drop and while stirring, 10 cc. of normal hydrochloric acid and from 6 to 10 per cent, i. e., from 15 to 25 Gm. of cane sugar, to taste.

Cholesterol Metabolism and Growth of Hair.—Growth of hair may be promoted by rubbing cholesterol petrolatum or plain petrolatum vigorously into the skin, while the mere application of either ointment has no effect. The efficacious factor is the irritation of the skin produced by the rubbing. There is no specific action of the cholesterol. These deductions were made from the results of animal experiments.

Wiener klinische Wochenschrift, Vienna

41: 1-40 (Jan. 5) 1928. Partial Index

*Dead Point, "Second Wind" and Angina Pectoris. K. F. Wenckebach.—p. 1.
*Pathologic Anatomy of Angina Pectoris. H. Kutschera-Aichbergen.—p. 6.
*Diagnosis and Prognosis of Syphilitic Aortic Diseases. H. Schlesinger.—p. 9.
Cystic Cavities Appearing Normally During Development of Cerebellum in Man. F. Hochstetter.—p. 13.
Inoculation of the New-Born with B C G. A. Calmette.—p. 14.
Geochemistry and Biochemistry of Iodine. G. Lunde.—p. 15.
*Protective Inoculation Against Measles. J. Zikowsky.—p. 19.
Acute and Subacute Endocarditis. P. Saxl.—p. 21.
Insulin Sensitiveness. K. Csépai and Z. Ernst.—p. 25.
*Herpes Zoster in Angina Pectoris. R. Wertheimer.—p. 26.
Cure of Genuine Lipoid Nephrosis. E. Felber.—p. 27.

Dead Point, "Second Wind" and Angina Pectoris.—Wenckebach compares the course of the attack in ambulatory angina pectoris with the physiologic processes in prolonged physical exertion. Under normal conditions the oppression, amounting sometimes to slight pain, due to congestion of the arteries from increased heart action, passes quickly because of the prompt opening of the peripheral vessels. But in angina pectoris there is severe pain, which, by reflex action, keeps the peripheral vessels closed. A vicious circle is thus set up. Nitrite treatment opens the peripheral vessels and is therefore more than a symptomatic therapy. The discovery of a means to keep the peripheral circulation open would be the greatest step forward in the treatment of angina pectoris. Similarly, interruption of the afferent paths of pain conduction is more than a palliative remedy, since it can prevent the formation of the vicious circle.

Pathologic Anatomy of Angina Pectoris.—Overdistention of the wall of the coronary artery and atrophy of its muscular sheath were demonstrated by Kutschera-Aichbergen in microscopic examinations in three cases of angina pectoris with coronary sclerosis. These observations harmonize with the distention theory of angina pectoris rather than with the spasm theory.

Diagnosis and Prognosis of Syphilitic Diseases of the Aorta.—The increase in mesaortitis in recent years is beyond question. Schlesinger says some statistics place this among the most frequent of syphilitic localizations. The ascending aorta is a favorite site. It is often combined with atheroma, and aneurysm is a frequent sequela. Insufficiency of the aortic valve, when not from endocarditis, is syphilitic in origin in the overwhelming majority of cases. A myocardiac process of syphilitic nature often accompanies the aortic changes. If the coronary arteries become involved, we have the phenomena of angina pectoris. One third of the cases of syphilitic aortic disease have a negative Wassermann reaction. The prognosis depends much on localization, complications and the time of beginning treatment. In isolated disease of the ascending aorta, it may be relatively benign. Aortitis accompanying neurosyphilis is seldom dangerous. On the other hand, more than half of the patients with mesaortitis die of this lesion.

Protective Inoculation Against Measles.—Zikowsky reports that among eighty-five children exposed to measles and inoculated at the right time and in correct doses with convalescent serum, three (3.5 per cent) developed the disease in a light form. Without inoculation, his experience would lead him to expect 90 per cent of children over 8 months old, similarly exposed (large wards), to come down with the disease.

Herpes Zoster with Angina Pectoris.—The location of the herpes zoster in this case was over the region of the heart, over the left scapula and on the ulnar side of the left arm. The patient described it as being almost identical with the skin areas to which the radiating pains of the angina pectoris (on the basis of a syphilitic mesaortitis) were projected. Obviously involvement of the eighth cervical segment was responsible for the herpes zoster of the forearm and involvement of the second, third and fourth thoracic segments was responsible for the herpes zoster on the anterior and posterior aspects of the thorax. A causal connection between the herpes zoster and the angina pectoris, Wertheimer thinks, cannot easily be denied.

Zeitschrift für Kinderheilkunde, Berlin

45: 1-222 (Dec. 16) 1927

Physiology of Taste Perception and the Sucking Reflex in Infants. A. Eckstein.—p. 1.
Relation of Sucking Reflex to Gastric Function. A. Schmidt.—p. 19.
Distribution of Taste Papillae in Children of Different Ages. H. Goldschmidt.—p. 28.
Effect of Food Intake on Leukocytic Blood Picture in Premature Infants. B. Grabensee.—p. 36.
Utilization of Maize Grits in a One Year Old Child. H. Murschhauser. —p. 45.
Electrocardiogram of the Infant, of the New-Born and of the Prematurely-Born. E. Burghard and A. Wunnerlich.—p. 56.
Method of Determining Glycogen and Carbohydrate Content of Liver. E. Burghard and H. Paffrath.—p. 68.
Glycogen Content of Human Liver at Moment of Death. E. Burghard and H. Paffrath.—p. 78.
Carbohydrate Content of Liver of Animal Fetuses at Different Periods of Gestation and Effect on It of Oxygen Deficiency and of Hunger in the Mother. A. Sake.—p. 93.
Streptococcus Toxin and Antitoxin. S. Meyer.—p. 105.
Change in Power of Hemolysis of Scarlet Fever and Erysipelas Streptococcus. H. Groenewald.—p. 110.
Interchangeable Use of Scarlet Fever Antitoxic Serum in Streptococcic Diseases and of Streptococcic Serums of Different Origins in Scarlet Fever and Other Streptococcic Diseases. J. Boente.—p. 135.
*Experimental Anthracosis and Tuberculosis. A. Nohlen.—p. 173.
*Semimicromethod for Determination of Wassermann Reaction in Cerebrospinal Fluid. H. Oster.—p. 186.
Influence of Treatment of Parents on Frequency of Clinical Manifestations in Congenital Syphilis. M. Emanuel.—p. 191.
Morbidity Among Premature Infants Receiving Fresh Air Treatment in Düsseldorf Children's Clinic. A. May.—p. 198.
Dangers to Physicians, Nurses and Personnel in Infectious Disease Clinics. U. Künzig.—p. 206.

Experimental Anthracosis and Tuberculosis.—In animal experiments Nohlen found that soot injected intravenously is deposited almost exclusively in the lungs and there leads to typical anthracosis with formation of connective tissue and small-cell infiltration. Histologic examination in moribund children (tuberculous meningitis, cavernous tuberculosis) receiving several soot injections of 1 cc. showed a heavy deposit of soot and the formation of connective tissue with small-cell infiltration around the tuberculous foci. The injections do not cause any disturbance of the general condition; they have a favorable effect on the course of the tuberculosis.

Semimicromethod for the Determination of the Wassermann Reaction in the Spinal Fluid.—With the semimicromethod of Nohlen and Ball, Oster attained in the spinal fluid a 100 per cent agreement with the original method.

Zeitschrift für Kreislaufforschung, Leipzig

19: 745-776 (Dec. 1) 1927

*Carbonic Acid Water Baths in Hypertonia. F. Lange and A. Störmer. —p. 745.
Capillary Microscopy: II. Diathermy in Dysbasic Conditions. W. Hollmann.—p. 751.

Carbonic Acid Water Baths in Hypertonia.—In Böhm's institute, Lange and Störmer report, cases of pure hypertonia without arteriosclerosis are treated with water baths saturated with carbon dioxide. At the beginning of the course of treatments, the temperature of the water is 35 or 34 C. and the duration of the bath is from three to five minutes. The carbonic acid has the effect of producing a feeling of warmth in the skin, but water under 33 C. should never be used. In all cases there was a decrease in blood pressure of from 20 to 50 mg. of mercury during the bath, and in nearly all cases the pulse became slower. In many cases a series of baths brought about permanent decrease in the blood pressure. The subjective symptoms (headache, restlessness, etc.) were influenced favorably in all cases. Rise in blood pressure during the bath shows either that it has lasted too long or that the temperature is too low. Arteriosclerosis is a contraindication to the treatment.

Zeitschrift für Tuberkulose, Leipzig

49: 241-320 (Dec.) 1927

*Intestinal Tuberculosis. H. Glatz.—p. 241.
Dangerous Trades and Prevention of Tuberculosis. I. Zadek.—p. 254.
Gold Treatment of Pulmonary Tuberculosis. C. Moewes.—p. 263.
Care of Sputum. B. Heymann and Pigger.—p. 274.
Disinfection of Tuberculous Sputum. G. Schröder.—p. 276.
Id. E. Bergin.—p. 279.

Intestinal Tuberculosis.—The histologic changes in the tuberculous intestine were studied by Glatz in fifty cases. In all these cases the pulmonary changes also were studied macroscopically and, in one half, microscopically. The productive, the exudative and the caseous forms of the disease could be histologically distinguished in the intestine. It was further established that the changes in the intestine paralleled those in the lung.

Zentralblatt für Chirugie, Leipzig

55: 193-256 (Jan. 28) 1928

Pellagra Symptom Complex in Surgery. E. Melchior.—p. 201.
Traumatic Hydronephrosis. F. Jumpertz.—p. 204.
Elephantiasis of Penis and Prepuce. H. Mannheim.—p. 207.
Early Diagnosis of Coxitis. B. Chatzkelson.—p. 209.
*Treatment of Recurrent Inflammation of Sweat-Glands of Axilla. G. Axhausen.—p. 212.
Operative Treatment of Habitual Dislocation of Patella. S. Ostrowski. —p. 214.
Hahn's "New" Stereoscope. L. Drüner.—p. 216.

Treatment of Recurrent Inflammation of Sweat-Glands of the Axilla.—Axhausen treated recurrent infections of the axilla with injection of the patient's blood. The method as applied in eighteen cases proved to be remarkably effective and rapid. Areas of infiltration and of inflamed foci disappeared in three or four days, small areas of softening became absorbed without perforating. Healing of the area took place rapidly. The tendency to recurrence disappeared.

In only one case did a new abscess develop. In this case recurrence was due to improper technic in injection. Because injection is painful, a general anesthesia of short duration is advisable. Axhausen uses a 30 cc. syringe with a rather large needle. All of the apparatus used is moistened with a 1 per cent solution of sodium citrate to prevent coagulation. From 40 to 60 cc. of blood is injected under the skin of the axillary region. His aim is to undermine rather than to circumscribe the area. The value of the method is to be ascribed to the increase in the local tissue resistance. He noticed the same beneficial effect when applying this method to ulcerations and granulations, especially in ulcer of the foot and in roentgen-ray ulcer.

Nederlandsch Tijdschrift. v. Geneeskunde, Amsterdam

71: 2681-2772 (Dec. 24) 1927

Spontaneous Cure of Total Stenosis of Esophagus; Cure of Umbilical Hemorrhage in Infant. B. E. J. H. Becking.—p. 2684.
*Experiences in Active Immunization Against Scarlet Fever. D. van Dorp, B. Andreae and N. Speelman.—p. 2692.
Multiple Tumors of Larynx in Case of Kaiser Friedrich the Third. H. T. Deelman.—p. 2695.
Family Trees of Psychiatric Interest. J. Lobstein.—p. 2700.
Intestinal Occlusion from Compression by Chyle Cyst. S. Hylkema. —p. 2713.

Experiences in Active Immunization Against Scarlet Fever.—Among 233 persons subjected to active immunization in a children's hospital, van Dorp et al. saw an acquired negative reaction return to positive and a positive reaction become more strongly positive in a number of cases. They think it probable that in many of these cases the humoral immunity has been transformed into a latent cellular immunity, so that, although no free toxin is present in the body fluids, a small quantity of toxin is sufficient to stimulate the allergic cells to the rapid production of antitoxin, with resultant return to a negative reaction. Thus, in four of eight children in whom the Dick reaction had become positive after having been rendered negative, the reaction was again negative five days after injection of 120 skin test doses.

71: 2773-2828 (Dec. 31) 1927

Therapeutic Application of Duodenal Sound. G. Jordans and H. Bartels. —p. 2774.
*Congenital Dislocation of Hip. R. J. Harrenstein.—p. 2783.

Dislocation of the Hip in Fetal Life.—Harrenstein discovered dislocations of the hip in two fetuses of six and seven months. From the subsequent changes, it was possible to place the dislocation early in fetal life. Anatomic peculiarities in the specimens suggest an incomplete anlage for the hip joint, with predisposition to dislocation. Harrenstein regards pull on the part of the stretched spinal column as the direct cause of the dislocation. The article is illustrated with photographs and diagrams.

Bibliotek for Læger, Copenhagen

119: 831-873 (Dec.) 1927

*Capillary Nerves and Their Reflex Activity. A. Krogh.—p. 831.
*Metabolism Through Capillary Walls. A. Krogh.—p. 841.
Solubility of Concretions in Urinary Tract. J. Meyer.—p. 852.
Pigmented Nevi in Human Skin (Benignant Melanoblastomas). A. Kissmeyer.—p. 864.

Capillary Nerves and Their Reflex Activity.—Krogh describes connections between the capillaries and both the sensory and sympathetic nervous systems, and discusses reactions or axon reflexes in nerve tracts not yet anatomically demonstrated. He pleads for the closest cooperation of anatomists, histologists, physiologists and clinicians in advancing the knowledge of capillary innervation.

Metabolism Through Capillary Walls.—Krogh says that the capillary surface varies greatly in the different tissues and seems to be related to the metabolic intensity. Functional adaptation according to the varying intensity of metabolism is also indicated, few but regularly apportioned capillaries being open during periods of rest. In general, colloids are not diffusible through the capillary endothelium, but the capillaries in all tissues can become permeable to colloids. The normal impermeability to albumin is of the greatest importance in the movement of fluids to and from the blood. He describes the formation of exudates rich in albumin through abnormally increased capillary permeability and the mechanism of typical filtration edemas in nephrosis and in cardiac disorders.

Ugeskrift for Læger, Copenhagen

89: 1213-1228 (Dec. 29) 1927

*Diagnosis and Medical Treatment of Cancer of Rectum. Kramer-Petersen.—p. 1213.

Diagnosis and Medical Treatment of Cancer of Rectum.—On the basis of his twenty cases of rectal cancer, Kramer-Petersen describes the various symptoms. Rectal examination is advised in all cases with irregularity of defecation or rectal hemorrhage, and digital examination and, to a certain extent, endoscopy, are stressed as being decisive in diagnosis. Internal treatment of rectal carcinoma, while only palliative, gives gratifying results. He warns of the danger of ileus in internal treatment. If suitable diet and mild cathartics do not relieve the tenesmus, mild narcotics are advised in suppositories with pantopon and belladonna. In rectal hemorrhage, therapy falls short. He holds rectal cancer to be surgical, and stresses the internist's part in early diagnosis, including determination of the histologic form.

90: 1-28 (Jan. 5) 1928

*Irradiation of Benign and Malignant Tumors. E. Collin.—p. 1.

Radiotherapy of Benign and Malignant Tumors.—The 1,266 nongynecologic cases treated in the Copenhagen radium institute, from 1920 to 1924, are reviewed by Collin. The results in the 565 instances of benign tumor were particularly good. Radium was mostly used; in some cases the roentgen ray. For flat nevi freezing, electropuncture, and phototherapy are most successful; for pedunculated angioma, excision is best. The pigmented nevus verrucosus responds to radium therapy, but is treated as a malignant tumor. Of the 600 malignant tumors, eighty-four were skin cancers of the face, extensive, inoperable or presenting difficulties for operation. Of those treated with radium in the first three years, 72 per cent were cured (13 per cent of the patients were not traced). Of the twenty-six cases of lip cancer treated with radium in this period, 77 per cent were cured (4 per cent not traced). Epitheliomas resistant to repeated roentgen-ray applications may disappear after one radium treatment. He emphasizes that radium treatment or operation is indicated on recurrence of skin cancer after one or, at most, two roentgen-ray treatments, likewise, on recurrence of lip cancer after roentgenotherapy. Roentgen-ray treatment of the regional glands is always given in connection with radium treatment of lip cancer and seems to reduce the number of metastases. In cancer of the mouth and tongue, electrocoagulation and radium needles with roentgenotherapy seem most effective. In cancer of the esophagus, he advocates gastrotomy immediately on diagnosis, followed by intensive roentgenotherapy. The combination of colostomy and roentgen-ray treatment is advised in difficult cases of rectal cancer. He considers radium treatment of cancer of the glans penis with roentgenotherapy of the regional glands absolutely called for. In epulis, immediate radium treatment is indicated. There are twenty-seven illustrations.

90: 29-48 (Jan. 12) 1928

*Red Light in Treatment of Smallpox. J. H. Thierry.—p. 29.
*Salicylic Poisoning After Intravenous Injection of Sodium Salicylate in Treatment of Varices. E. G. Jørgensen.—p. 31.

Red Light Treatment of Smallpox.—Thierry's observations were made in a smallpox epidemic in Valparaiso, Chile. In the 192 patients treated in red light from the first days of the disease, there was no noticeable effect on mortality, suppuration, or scars, but with only one exception none of these patients developed eye lesions, while of those treated in daylight about 10 per cent had corneal pustules, about 3 per cent lost one eye, and about 1 per cent, both eyes.

Salicylic Poisoning After Intravenous Injection of Sodium Salicylate in Treatment of Varices.—In Jørgensen's patient, aged 47, a typical instance of salicylic intoxication followed an injection of 5 cc. of 20 per cent sodium salicylate. The three previous injections had been well borne. He is unable to explain this sudden hypersensitiveness.